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# DEFENSE EQUAL OPPORTUNITY MANAGEMENT INSTITUTE

DIRECTORATE OF RESEARCH

## AN ANALYSIS OF DISCIPLINE RATES AMONG RACIAL/ETHNIC GROUPS IN THE U.S. MILITARY

Fiscal Years 1987-1991

by

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Topical Research Intern Program

1992

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## EXECUTIVE SUMMARY

1. **INTRODUCTION.** A recent review by the U.S. Commission of Civil Rights has placed the administration of the Unified Code of Military Justice (UCMJ) under increased scrutiny. This review focused on allegations that minority service members receive a disproportionate amount and more severe administration of disciplinary actions within the military services. Also, it alleged that within the military justice system, minority members were treated differently based on the race of the accused.

2. **PURPOSE.** The purpose of this report is to present the findings of an examination of disciplinary data from Military Equal Opportunity Assessments (MEOA) reports. The objective is to determine the changes over time and the representation of racial/ethnic groups among punishments, and to explain possible underlying reasons for differences.

3. **METHODOLOGY.** The study methodology involved the collection and analysis of data on the receipt of punishments (Courts Martials and Non-Judicial Punishments (NJP)) by racial/ethnic group. The data was collected from the MEOA reports that the services provide on an annual basis to the Office of the Secretary of Defense (OSD).

### 4. **CONCLUSIONS.**

a. The total number of courts martial convictions has decreased significantly, by 48 percent, in the last five fiscal years (FY87-FY91). The percentage of courts martial convictions for all services and racial/ethnic groups has also decreased; however, the decline has varied considerably between racial/ethnic groups. The number and percent of the population being court martialed is decreasing faster for white service members as compared to black service members. This explains why the overrepresentation of black service members has increased steadily for the last 5 fiscal years. The overrepresentation of black service members has increased from 33 percent in FY87 to more than 74 percent in FY91. Black service members in FY91 were 2.2 times more likely to receive courts martial convictions than white service members. Black service members, representing 21.6 percent of the military population received 37.6 percent of the convictions resulting in 0.69 percent of the black military population being courts martialed. In comparison, white service members, representing 70.3 percent of the population, received 54.9 percent of the courts martial convictions, resulting in only 0.31 percent of the white military population being courts martialed. The remaining 8.1 percent of the population were other minorities, who received the remaining 7.5 percent of the courts martial convictions. The increased overrepresentation of blacks is not a result of an increase in the number of courts martial convictions among blacks, but rather, results from the number of courts martial convictions of other racial/ethnic groups, particularly white service members whose number of convictions have decreased faster than the number of convictions among black service members.

b. The relative frequency of court martial convictions is very low. In FY 91, the average rate of convictions for all service members was equal to four-tenths of one percent (.4 percent or .004) of the total military population.

c. As with courts martial, the total number of NJPs has decreased significantly, by 47 percent, in the last five fiscal years (FY87-FY91). The percentage of NJPs for all services and racial/ethnic groups is decreasing. The decrease in NJPs has varied between racial/ethnic groups. The overrepresentation of black service members among NJPs has stayed relatively constant, at about 50 percent, for the last 4 fiscal years. However, in FY91 black service members were still 1.7 times more likely to receive NJPs than white service members. Black service members made up 21.6 percent of the military population and received 32.2 percent of the NJPs for a 7.81 percent NJP rate. White service members made up 70.3 percent of the population and receive 60.2 percent of the NJPs for a 4.5 percent NJP rate. The remaining 8.1 percent of the population were other minorities, who received the remaining 7.6 percent of the NJPs. The representation of Hispanic and AI/AN service members in NJPs has increased the most in the last five fiscal years.

d. The fact that the overrepresentation of black service members among courts martial convictions is greater than their overrepresentation among NJPs, suggests that blacks are involved in more serious offenses. This is supported by Nordlie, et al. (1979), who found that black service members were overrepresented in the commission of violent and confrontation crimes, while white service members committed the majority of crimes against property, and military specific offenses.

e. Commanders have greater discretion over handling NJPs compared to court martial convictions. If the UCMJ system is racially biased, then one may expect that overrepresentation among blacks would be greater for NJP infractions as compared to courts martial. However, the data suggests just the opposite, the degree of overrepresentation among blacks is less with respect to NJPs and black overrepresentation is growing at slower rates than it is with court martial convictions. Also, the percent of black service members being awarded NJPs is decreasing faster than other racial/ethnic groups. While this does not definitively answer the question of whether the NJP system is racially unbiased, it tends to contradict claims that the NJP system is unfair.

f. The rate of court martial convictions and Non-Judicial Punishments varies considerably from service to service. Undoubtedly this is a function of many different factors such as the way the different services administer discipline, tolerance to offenses, population characteristics of service member, etc. Further research into issues of discipline and disparities among service members should be a coordinated effort to insure that the conclusions and recommendations of studies of one service are applicable to the others.



## CHAPTER 1 - INTRODUCTION AND BACKGROUND

### 1. Study Background.

a. The Uniform Code of Military Justice (UCMJ) is a set of statutes governing military justice to which all service members are subject. The UCMJ contains articles which govern the administration of courts-martial, direct the commander in his/her implementation of Non-Judicial Punishments (NJP) procedures, and sets forth rules and regulations to which all personnel under UCMJ jurisdiction must adhere. NJP (sometimes known as "Article 15" after the section in the UCMJ where it is found) is part of the UCMJ and allows commanders to impose disciplinary punishments for minor offenses without convening a court martial. NJP is commonly used to correct the discipline of military personnel who have committed minor violations and/or infractions of the UCMJ. As shown in Figure 1, NJPs fall midway in terms of severity of punishment that a commander can impose against a service member.

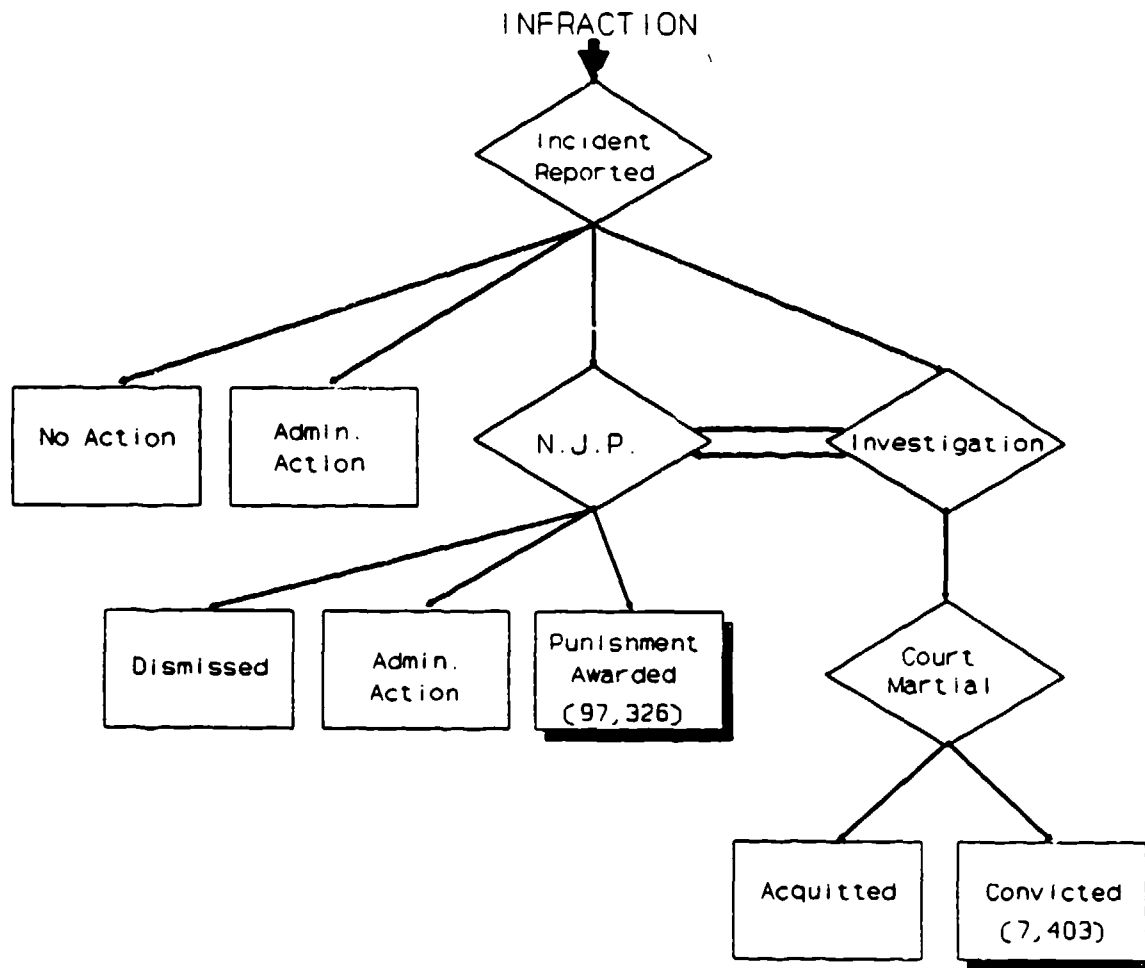


Figure 1. Discipline Flow Diagram

b. More serious offenses against the UCMJ may be referred by the commander to a court martial. The Manual for Court Martial (MCM, 1984) describes three types: the summary, for minor non-capital offenses; the special, for more serious non-capital offenses; and the general, usually reserved for major offenses. The Summary Court Martial (SCM) is seldom used; commanders usually prefer to dispose of minor UCMJ infractions at NJP rather than convene a SCM. The Special Court Martial (SPCM) is used more frequently, and a conviction of a SPCM is considered a felony conviction. A General Court Martial (GCM) may adjudge harsher penalties than either the SCM or SPCM, including the death penalty. A conviction by a GCM is also a felony conviction.

c. The fundamental difference between a court martial and NJP is that a court martial requires a special investigation, legal representation, and a trial. The Article 15 proceedings, while providing for more punishment options than a commander can impose administratively, are not considered trials. Within NJP, a commander has the discretion in whether to take no action, administration action, or to impose NJP.

2. Problem. A recent review by the U.S. Commission of Civil Rights has placed the administration of the UCMJ under increased scrutiny. This review focused on allegations that minority service members receive a disproportionate amount, and more severe administration of disciplinary actions within the military services. Also, it alleged that within the military justice system, minority members were treated differently based on the race of the accused.

3. Objective. The purpose of this report is to present the findings of an examination of disciplinary data from Military Equal Opportunity Assessments (MEOA) reports. The objective is to determine the changes over time and the representation of racial/ethnic groups among punishments, and to explain possible underlying reasons for differences.

4. Methodology. The study methodology involved the collection and analysis of data on the receipt of punishments (Courts Martials and NJPs) by racial/ethnic group. The data for FY87 through FY90 was collected from the MEOA reports that the services provide on an annual basis to the Office of the Secretary of Defense (OSD). The individual services were contacted in order to collect data for FY91. The data for FY91 was extracted from draft copies of the FY91 MEOA reports.

5. Analytical Techniques. Two statistical procedures were used in the data analysis: the Chi square test - an inferential procedure and calculation of a Representation Index (RI) - a descriptive statistic. These were used to determine whether differences existed in discipline data, and to summarize the quantitative data into a form easily comprehended. The data are also summarized and presented in graphic form.

a. Inferential statistics. Hypothesis testing is used in this study to determine whether the difference in actual discipline data compared to what is expected, given the population parameters. In statistics, the null hypothesis states that there is no difference between/among

actual data and expected data. Applying the null hypothesis to discipline data is the same as saying that, if race is not related in any way to courts martial convictions and NJPs, other factors being equal, then one would expect to find white and black service members receiving court martials and NJP in the same proportion as their total numbers in the military. Therefore, if 22% of service members are black, then one would expect that 22% of those court martialed would also be black. The first step in the analysis was the calculation to the Chi square test to determine whether the difference in proportions between/among actual and expected were statistically significant. If the results were not statistically significant, then there would be no need to further investigate or focus on the differences. However, all of the racial/ethnic group differences reported between/among actual discipline data in relation to expected data were found to reject the null hypothesis, and therefore the differences presented in this report are all statistically significant (See Appendix A).

b. Descriptive statistics include measures of central tendency (means), frequency distributions, percentages, and the Representation Index (RI). The concept of the RI, as defined in DA PAM 600-26, was adapted to create a standard by which to measure the degree to which an actual parameter varies from what is expected given a group's proportion in the population at large. The following formula was used:

$$\text{Representation Index} = \left[ \frac{\text{Actual Number}}{\text{Expected Number}} \times 100 \right] - 100$$

Where:

Actual Number = The discipline data reported in the MEOA by each military service.

Expected Number = Expected percentage times the base population (i.e., the number of court martial convictions or NJPs). The expected percentage is the population percentage of a particular group in question.

By dividing the actual number by the expected number, a ratio is created which expresses the extent to which the actual number is greater or lesser than the expected number. Multiplying by 100 converts the ratio to a more readily understood percentage. By subtracting 100 from the product, an indicator is created that is zero when actual and expected numbers are the same. If the index is zero or close to zero, this means that there is no difference between the actual and the expected dimension being considered. For the group and parameter in question, the formula yields the percentage over or underrepresented. If the RI is -20, as it is for white service members with regards to courts martial convictions, this means that white service members are 20 percent underrepresented than what would be expected given their associated population.

**6. Study Questions.**

a. What are the overall trends in discipline actions (courts martial convictions and NJPs) in the military justice system?

b. Do discipline actions vary for the different armed services?

c. How representative are minority groups with regards to discipline actions?

**7. Limitations.** As shown in Figure 1, the data analyzed in this report is limited to only the outputs of the UCMJ system, i.e., courts martial convictions and NJPs assessed. Data on service members entering the system, how they were handled, and infractions committed was not available. Therefore, this study alone does not answer the question of whether the UCMJ system is racially unbiased.

## CHAPTER 2 - Courts Martial Convictions

### 1. Trends in Courts Martial Convictions.

#### a. Number of Courts Martial Convictions.

(1) Figure 2 shows the total number of military courts martial convictions in the Department of Defense. The total number of courts martial convictions has decreased more than 52 percent in the last five fiscal years: from 15,739 in FY87 to 7,485 in FY91. The number of courts martial convictions for each of the military services has steadily decreased. In FY87 the Navy had nearly twice as many courts martial convictions as any other service. However, the number of Navy courts martial convictions has decreased dramatically (71%) in the last five years from 7,088 in FY87 to 2,025 in FY91. The other services have shown more modest decreases in the number courts martial convictions; 40 percent for the Army, 36 percent for the Marine Corps, and 31 percent for the Air Force.

(2) One theory advanced from both DEOMI personnel and participants at the UCMJ conference held on 6 April 1992 at Patrick Air Force base was that the improvements in the overall quality of service members, (i.e., tougher recruiting standards in terms of higher Armed Forces Qualification Test scores, the higher percentage of high school graduates, and fewer criminal and moral waivers), have translated into the need for fewer courts martial. The determination of a relationship between service member quality and service behavior was beyond the scope of this report.

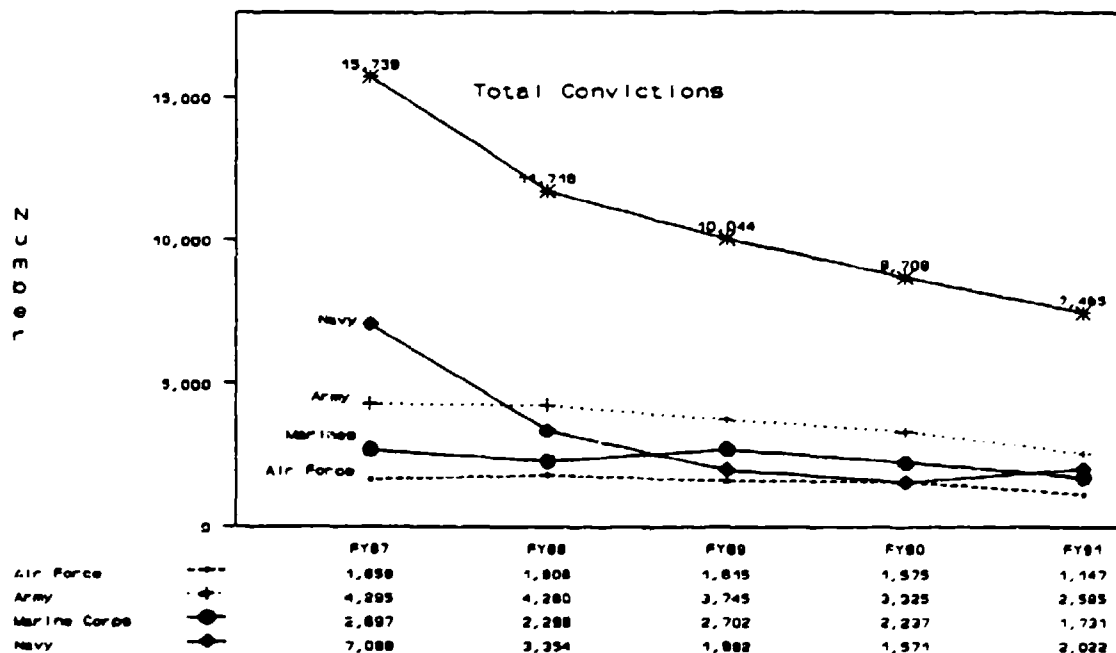


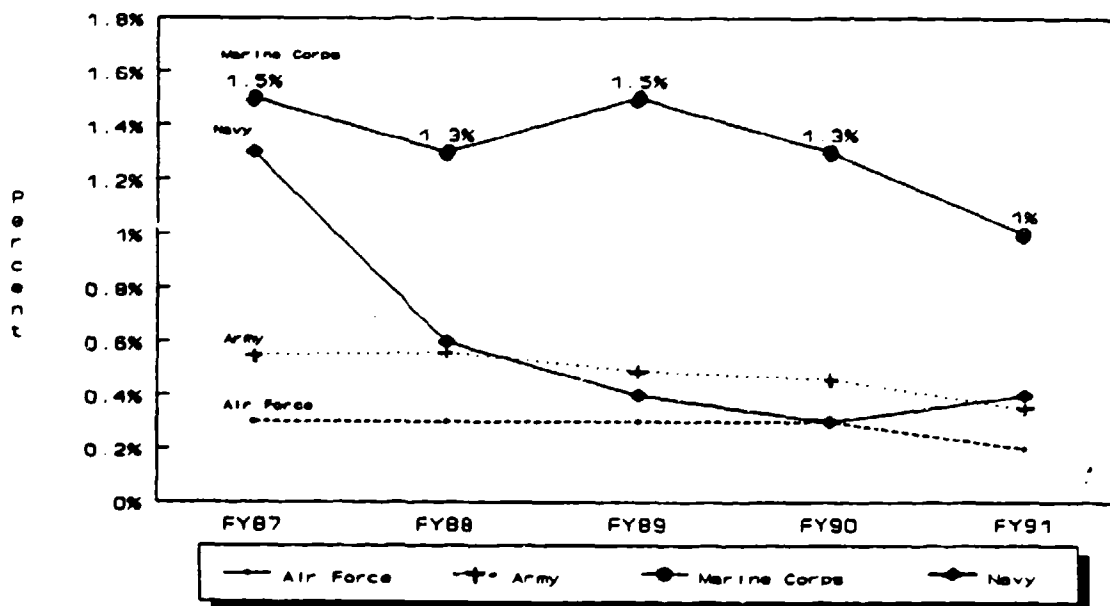
Figure 2. Number of Courts Martial Convictions by Military Service (FY87-FY91)

**b. Percentage of Courts Martial Convictions.**

(1) The percentage of members from each service who have been court martialled is presented in Figure 3. The Marine Corps has nearly as many courts martial convictions as other services, but has fewer service members, therefore the Marine Corps has the highest rate of courts martial convictions among the services, between 1.0 to 1.5 percent of the population. Two possible explanations have been suggested as to why the courts martial convictions rate in the Marine Corps is higher than the other services - a greater emphasis on discipline, and the gender composition of the Corps (fewer females than other services).

(2) The percentage of courts martial convictions for each of the military services has been decreasing over the last five years. The most significant declines in the service population being court martialled was found within the Navy, a change from 1.34 percent in FY87 to .41 percent in FY91 followed by the Marine Corps, the percentage declined from 1.5 percent to 1 percent, the Army, the percentage declined from .55 percent to .35 percent, and the Air Force, the percentage declined from .3 percent to .2 percent.

(3) The most meaningful statistic identified in Figure 3 is the relative infrequency of courts martial convictions for all services. In FY91, the average rate of courts martial convictions for all service members was equal to four-tenths of one percent (.4% or .004) of the total military population. Additionally, a very positive feature of both figures is that both parameters - the number of courts martial convictions and the percent of courts martial convictions - have continued to decline over the last five fiscal years.



**Figure 3. Percentage of Population Court Martialled by Military Service (FY87-FY91)**

## 2. Minority Courts Martial Convictions.

a. Number of Minority Courts Martial Convictions. While the total number of courts martial convictions has decreased dramatically, the decrease in the numbers of courts martial convictions has varied considerably between racial/ethnic groups. Figure 4 exhibits the number of courts martial convictions by racial/ethnic groups. The number of courts martial convictions has decreased most significantly among white service members. The number of courts martial convictions has decreased more than 60 percent for white service members compared to 35 percent for black service members, and 38 percent for hispanic service members. Also, the number of courts martial convictions has decreased more than 63 percent for American Indian (AI)/Native Alaskan (NA) service members, the number of courts martial convictions has decreased 1 percent for Asian American (AA)/Pacific Islander (PI) service members. Note however, that the number of AI/NA and AA/PI courts martial convictions is relatively insignificant (less than .15%) when compared with the total number of courts martial convictions throughout DoD.

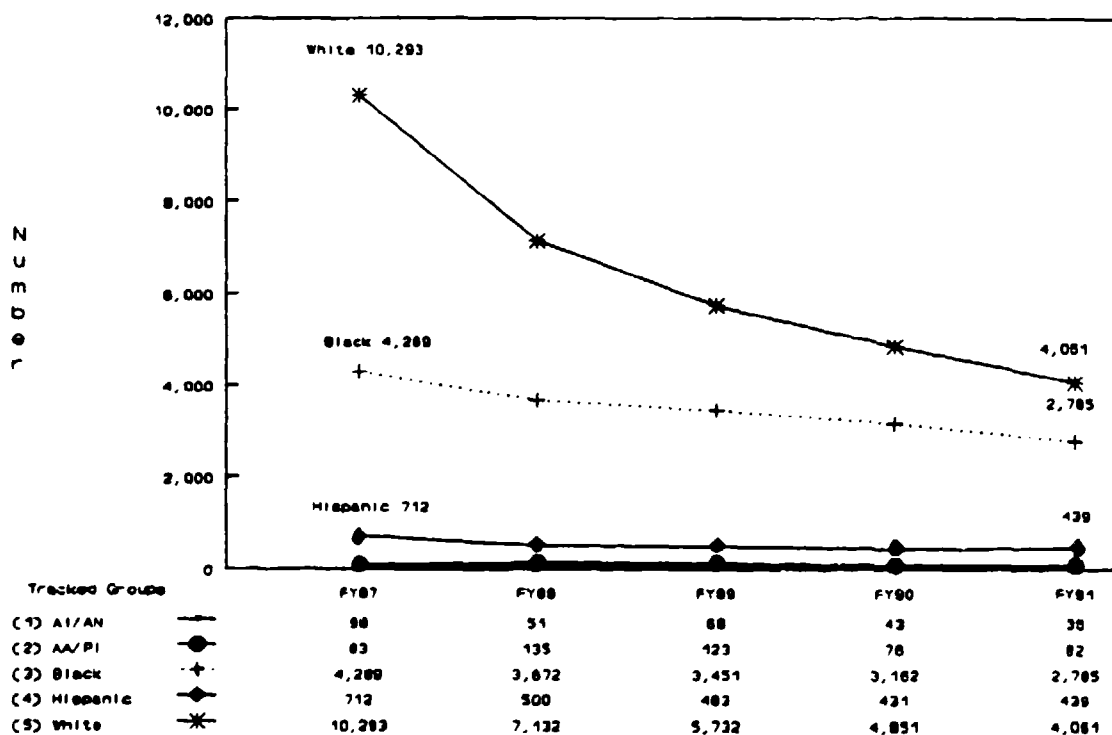


Figure 4. Number of Courts Martial Convictions by Racial/Ethnic Group (FY87-FY91)

b. Percentage of Courts Martial Convictions. The percentage of members from each racial/ethnic group who have been convicted of courts martial offenses is presented in Figure 5. Figure 5 incorporates the dimension of each racial/ethnic population. The percentage of courts martial convictions for white service members is decreasing faster, with the exception of AI/AN, than minority service members. The percentage of white service members being court martialed has decreased from .69 percent of their population in FY87 to only .31 percent in FY91, or a decrease of more than 55 percent. The percentage of hispanic and AA/PI service members courts martialed has decreased more than 42 percent. The percentage of black service members being court martialed has decreased only 33 percent; the lowest rate of decline for all racial/ethnic groups. Thus, the percentage of courts martial convictions for white service members is decreasing faster than minority service members, with the exception of AI/AN service members.

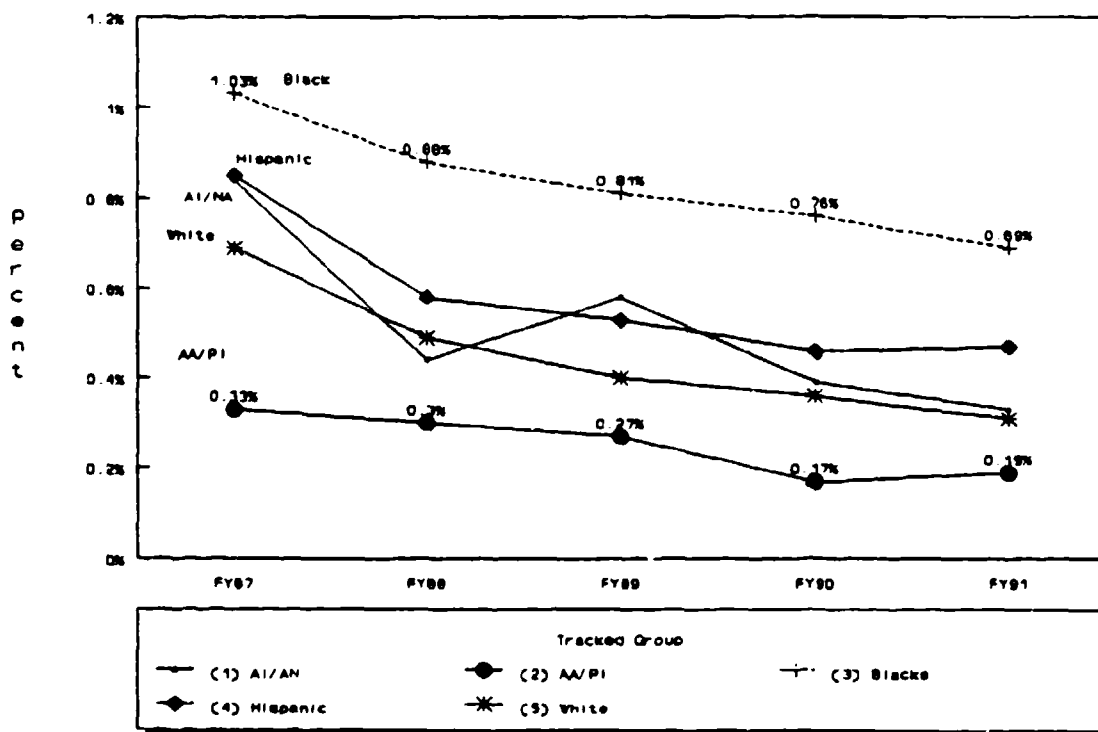


Figure 5. The Percent of Population Court Martialed by Racial/Ethnic Group (FY87-FY91)



### 3. Minority Representation Among Courts Martial Convictions.

#### a. Percentage of Courts Martial Convictions by Race.

(1) Since the number of white courts martial convictions is decreasing faster than the number of black courts martial convictions, the racial/ethnic mix of service members being court martialed has changed considerably. Figure 6 shows the percentage of courts martial convictions assessed to each of the racial/ethnic groups. In FY87, 65 percent of the service members who were court martialed were white, and 27 percent were black. By FY91, white service members represented only 54 percent, and black service members represented 37 percent of those being court martialed.

(2) If the trend shown in Figure 6 continues at the same rate, the number and percent of minority group courts martial convictions in the near future will be greater than those of the majority. As of FY91, minority courts martial convictions represent more than 50 percent of the Army courts martial convictions. Similar graphs for each individual service are presented in Appendix B.

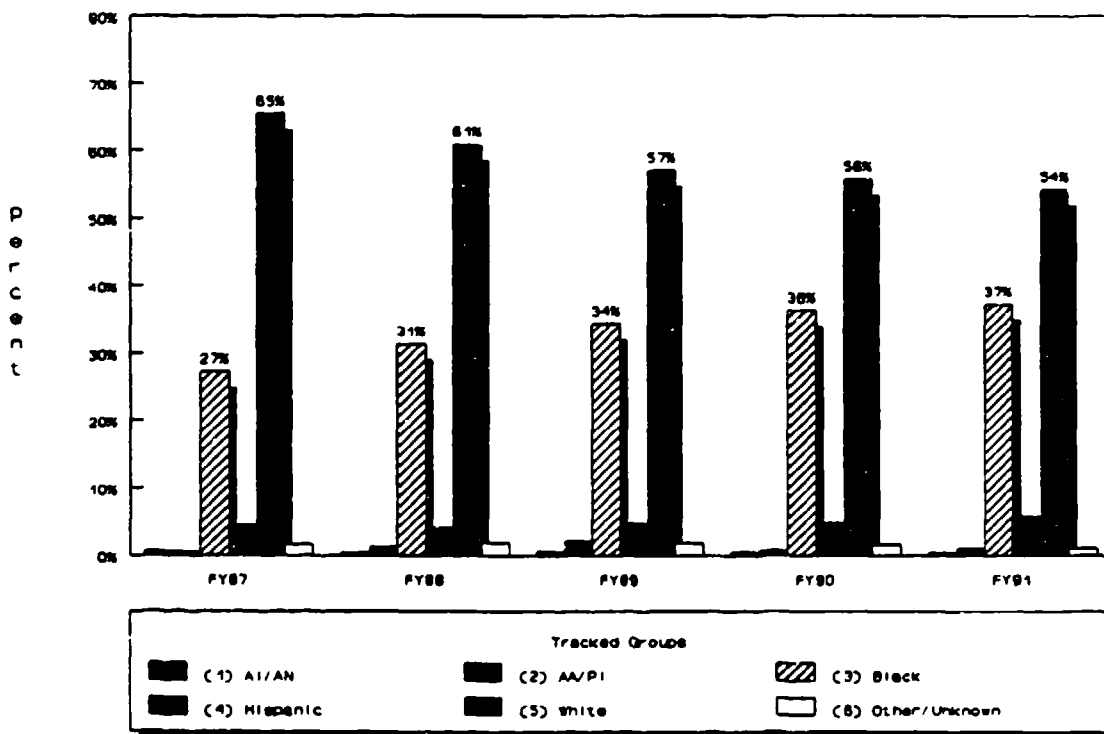


Figure 6. Percentage of Courts Martial Convictions by Racial/Ethnic Group - Total DoD (FY87-FY91)

b. Minority Over/Underrepresentation Among Courts Martial Convictions.

(1) The concept of the RI, as previously discussed, was applied to the total military courts martial convictions data for FY87 through FY91. The results are shown in Figure 7. The results of the RI can be interpreted to mean that black service members were 36% overrepresented in courts martial convictions than would otherwise be expected given their related population in FY87. The overrepresentation of black service members has increased steadily for the last 5 fiscal years. The overrepresentation of black service members has increased from 36 percent in FY87 to more than 74 percent in FY91. Conversely, white service members are underrepresented with respect to courts martial convictions. The underrepresentation of white service members has increased from 9 percent in FY87 to more than 22 percent in FY91. Additionally, AA/PI are nearly always underrepresented, usually significantly underrepresented, with regard to courts martial convictions. The RI for all other minority groups seems to vary considerably from period to period with no discernible patterns or trends within group representation.

(2) The increased overrepresentation of blacks is not caused by an increase in the number of courts martial convictions among blacks but rather, it is a result of the number of courts martial convictions of other racial/ethnic groups, particularly white service members whose number of convictions have decreased faster than the number of convictions among black service members.

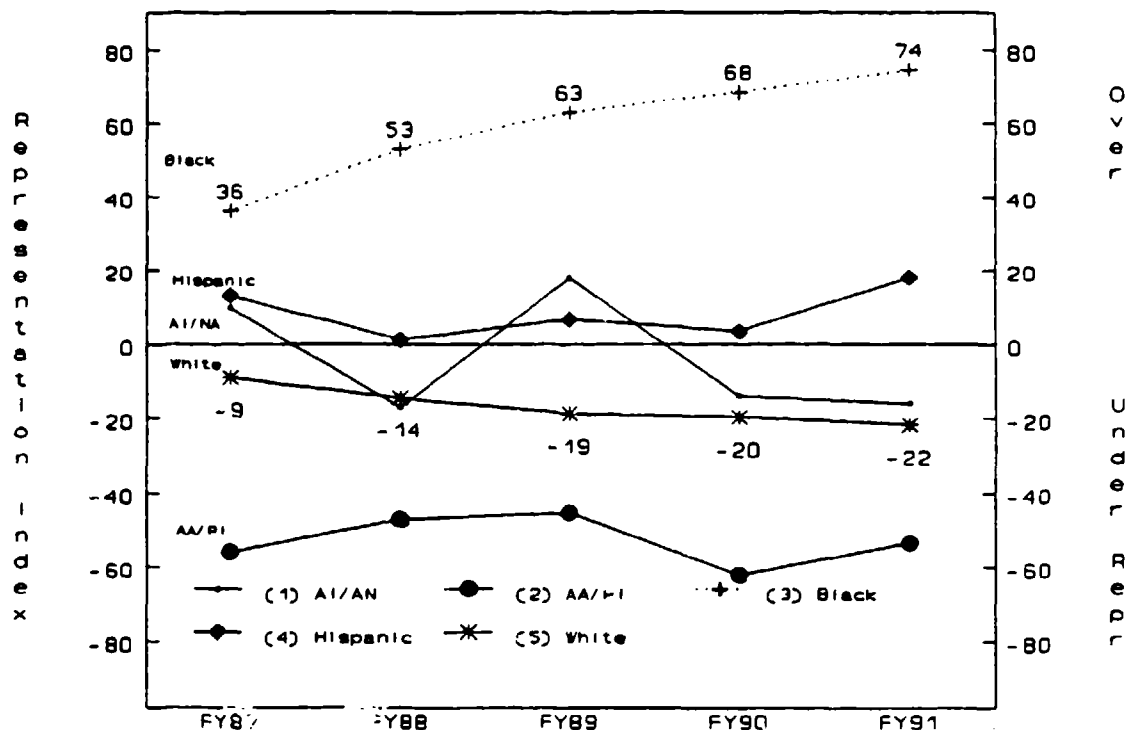


Figure 7. Representation of Racial/Ethnic Groups in Courts Martial Convictions (Total DoD)

(3) The degree of minority overrepresentation in courts martial convictions varies considerably between the different services. For all services, black service members have consistently been overrepresented among courts martial convictions. Figure 8 shows the overrepresentation of black service members in courts martial convictions for the different services. The figures in appendix A highlight the difference in minority representation among courts martial convictions. In the Air Force, black service members are the only minority that has been consistently overrepresented with regards to courts martial convictions. In the last five years, nearly twice as many black service members have been court martialed as would be expected given their population parameters. Black and hispanic service members have been overrepresented in courts martial convictions within the Navy and the Marine Corps. For these two services, the overrepresentation of black service members has increased significantly in the last five fiscal years. In the Army, the percent of overrepresentation of black service members has shown more modest growth.

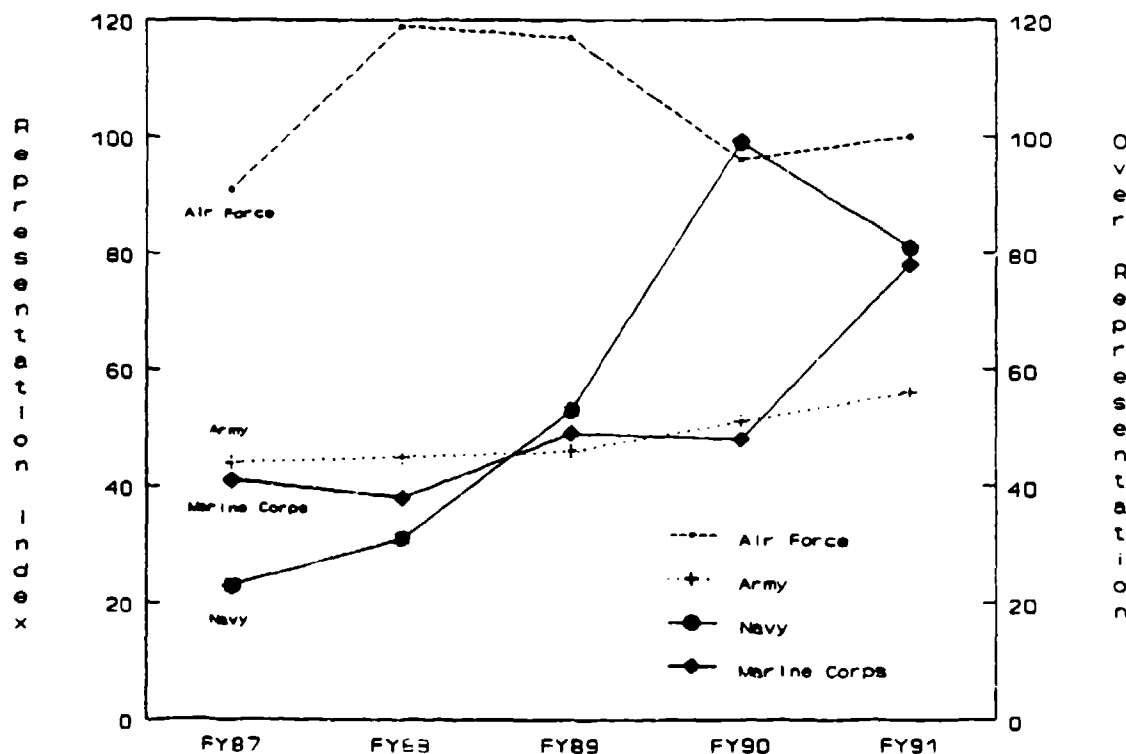


Figure 8. Overrepresentation of Black Service Members in Courts Martial Convictions by Military Service (FY87-FY91)

## CHAPTER 3 - Non-Judicial Punishments - Article 15

### 1. Trends in Non-Judicial Punishments.

a. Number of Non-Judicial Punishments. Figure 9 shows the total number of military NJPs by the DoD between FY87 to FY91. The total number of NJP has decreased more than 47 percent in the last five years; from 184,601 in FY87 compared with 98,173 in FY91. The number of NJPs for each of the military services has steadily decreased. In FY87, the Army had nearly twice as many NJP as any other service. However, the number of Army NJP has decreased considerably (52%) in the last five years, from 100,088 in FY87 to 48,025 in FY91. The other services have shown similar decreases in the number NJP; the Air Force has decreased 46 percent since FY87, while the Navy has decreased 41 percent, and the Marine Corps 33 percent.

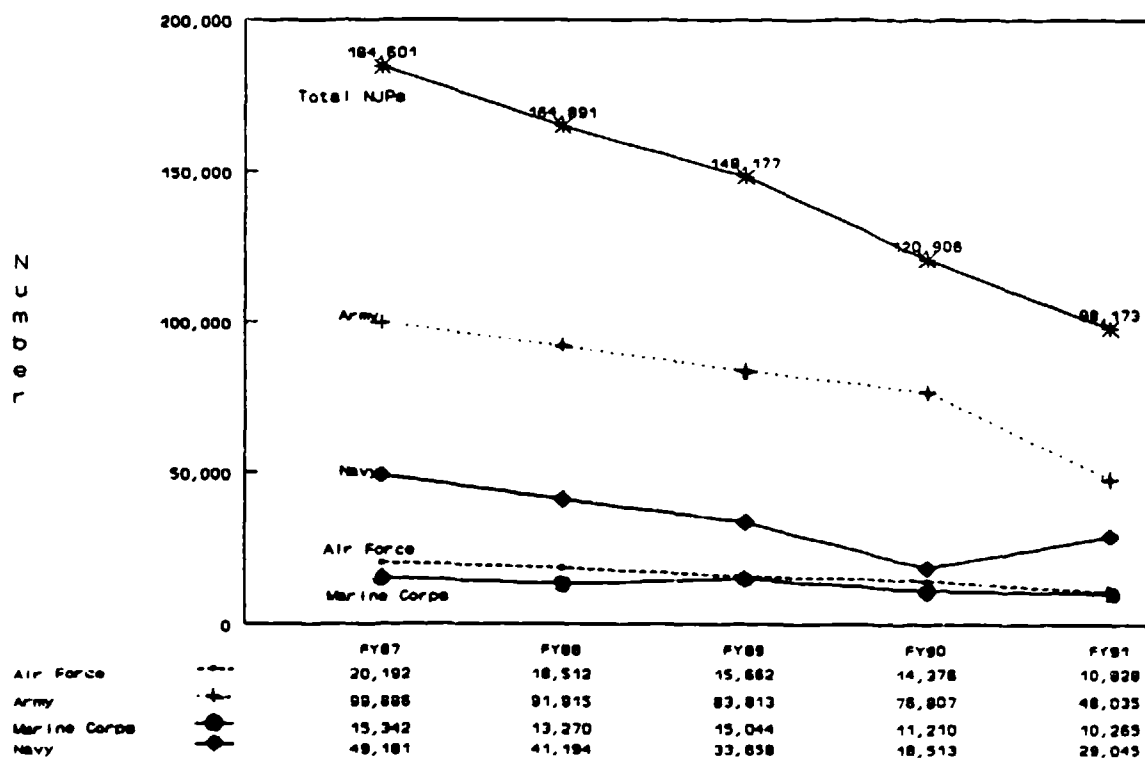


Figure 9. Number of Non-Judicial Punishments by Military Service (FY87-FY91)

b. Percentage of Non-Judicial Punishments.

(1) The percentage of members from each service who have been assessed an NJPs is presented in Figure 10. The percentage of NJP for each of the military services has been decreasing for the last five years. The most significant decrease in the rate of NJP was found within the Army. In FY87, the Army assessed an NJP to more than 12.9 percent of Army soldiers compared to only 6.6 percent in FY91. The rate of NJPs for both the Marine Corp and Navy has decreased about 3 percentage points, from 9 percent to 6 percent of their populations. The Air Force has historically awarded NJP within a very narrow range, from 2.1 percent to 3.4 percent of Air Force population.

(2) In FY91, the average rate of NJP for the Army, Navy, and Marine Corps was 6.3 percent and for the Air Force just over 2 percent of its population. Also, a very positive feature of both Figures 9 & 10 is that both parameters, the number of NJP and the percent of NJP, have continued to decline over the last five fiscal years.

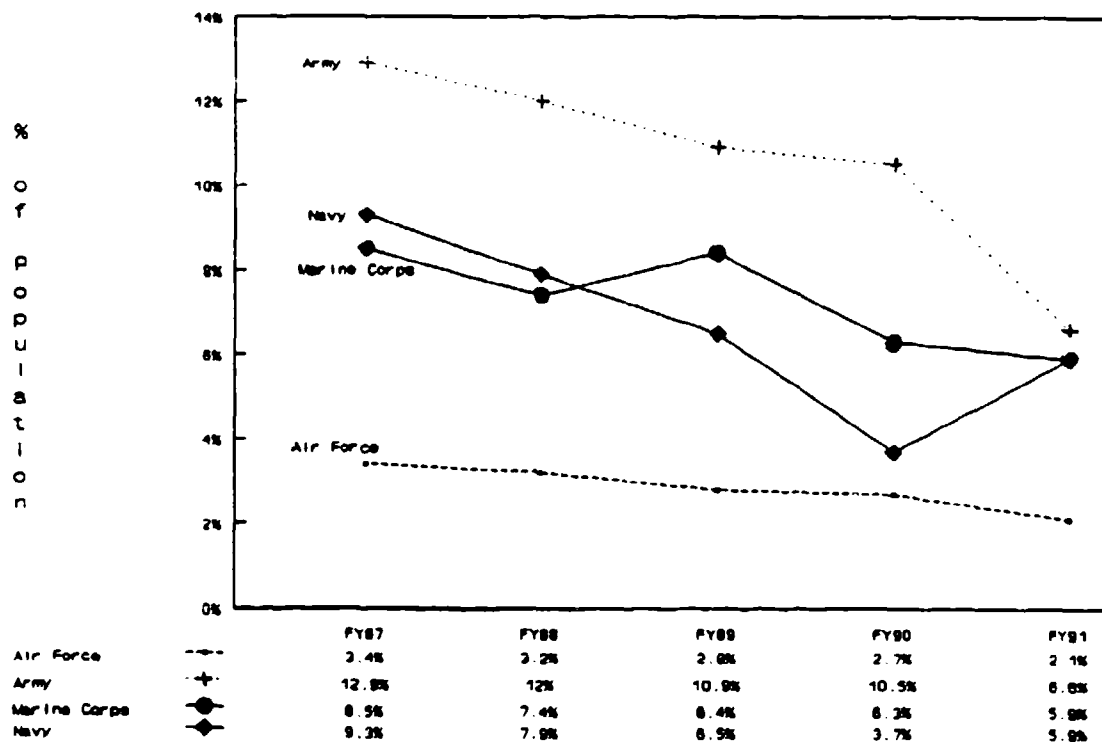


Figure 10. Percentage of Population Receiving Non-Judicial Punishments by Military Service (FY87-FY91)

## 2. Minority Non-Judicial Punishments.

a. Number of Minority Non-Judicial Punishments. Figure 11 exhibits the number of NJPs by racial/ethnic groups. While the total number of NJPs has decreased considerably, the decrease in the number of NJPs has varied between racial/ethnic groups. The number of NJPs has decreased most significantly among white service members. The number of NJPs has decreased more than 46 percent for white service members as compared to a 36 percent decrease for black service members, a 23 percent decrease for hispanic service members, and a 13 percent decrease for AI/AN. The number of NJPs has increased more than 26 percent for AA/PI. Note however, the percent of AA/PI NJPs is relatively insignificant (less than .61%) compared with the total NJPs throughout the military.

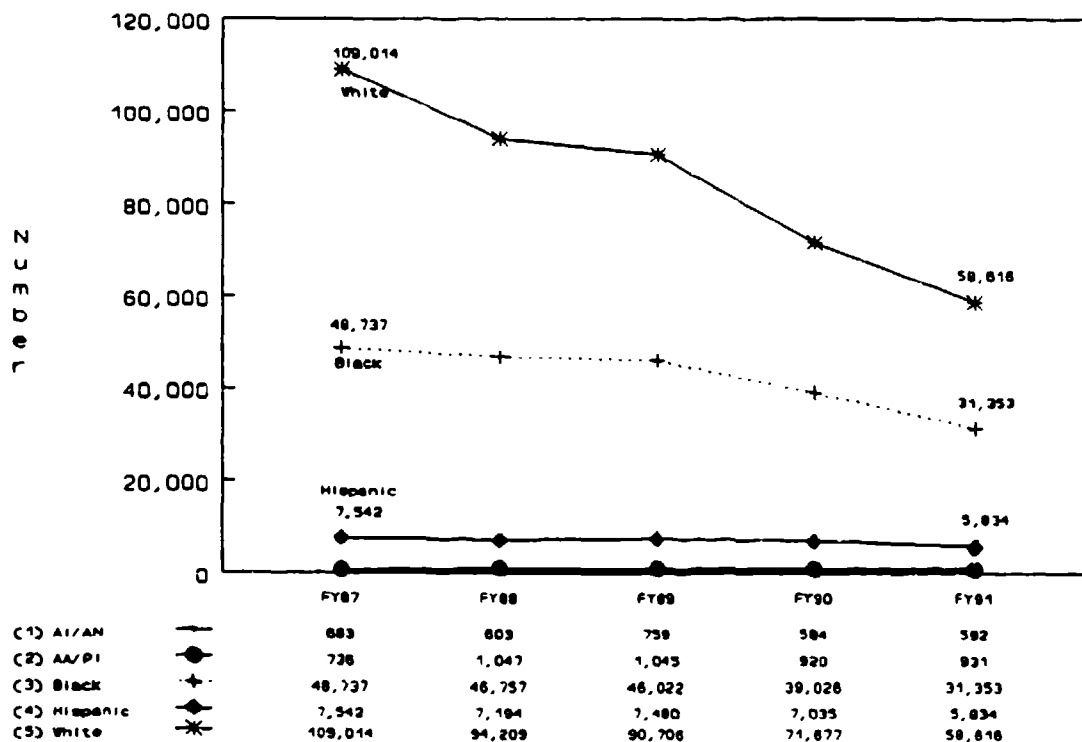


Figure 11. Number of Non-Judicial Punishments by Racial/Ethnic Group (FY87-FY91)

b. **Percentage of Minority Non-Judicial Punishments.** The percentage of members from each racial/ethnic group who have received NJP is presented in Figure 12. The percentage of NJPs by racial/ethnic group has decreased most significantly among white service members - a change from 7.3 percent in FY87 to 4.5 percent in FY91, or a decrease of more than 38 percent as compared to decreases of 33 percent for black service members, 32 percent for Hispanic service member, 28 percent for AA/PI, and 5 percent for AI/NA. The number of NJP infractions committed among AA/PI service members has increased, while the percentage of the population has decreased as a result of significant increases in the population of AA/PI service members.

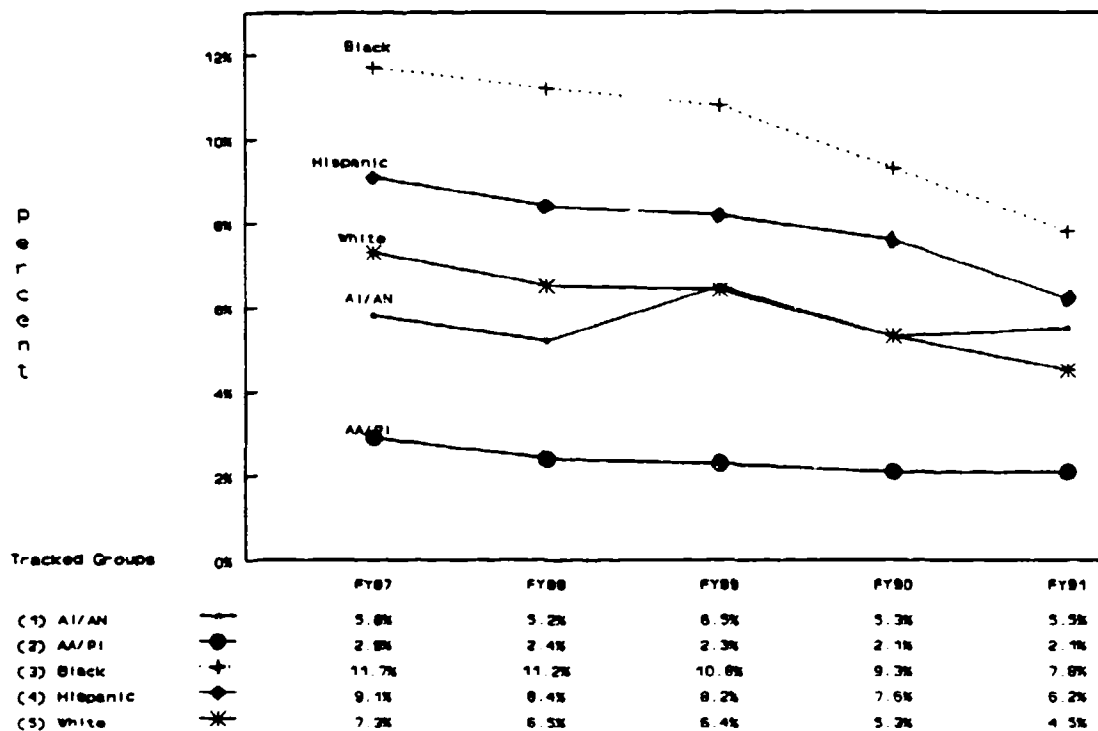


Figure 12. Percent of Population Receiving Non-Judicial Punishments by Racial/Ethnic Group (FY87-FY91)

### 3. Minority Representation Among Non-Judicial Punishments.

a. Percentage of NJPs by Race. Figure 13 shows the percentage of NJPs assessed to each of the different racial/ethnic groups. In FY87, 64 percent of the service members who were assessed NJP were white and 29 percent were black. By FY91, white service members represented only 60 percent and black service members represented 32 percent of those receiving NJP. The percentages among different racial/ethnic groups have remained fairly constant since FY88. Corresponding figures for each of the individual services are presented in Appendix B.

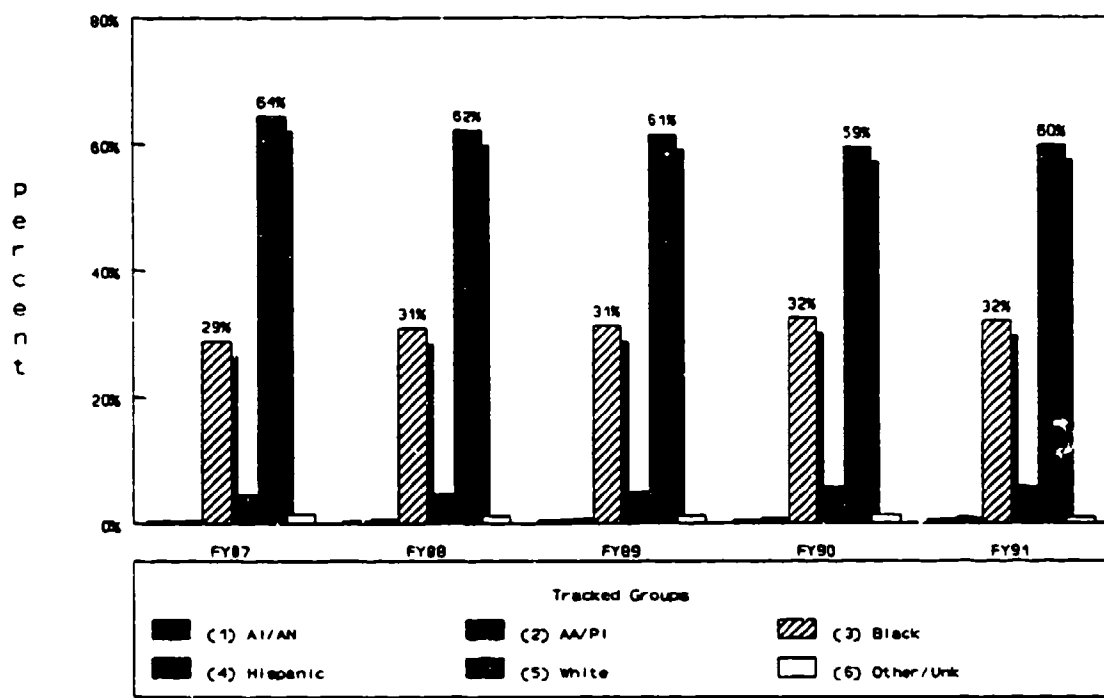


Figure 13. Percentage of Non-Judicial Punishments Received by Racial/Ethnic Group - Total DoD (FY87-FY91)



b. Minority Over/Underrepresentation Among NJPs.

(1) The concept of the RI, as previously discussed, was applied to the total NJP data for FY87 through FY91. The results are shown in Figure 14. The results of the RI can be interpreted to mean that black service members were overrepresented by 44% among NJPs than would otherwise be expected given their related population in FY87. Since FY88, the representation of black service members has stayed relative constant at about 50 percent for the last 4 fiscal years. The representation of hispanic and AI/AN service members in NJPs has increased the most in the last five fiscal years. Additionally, for all services AA/PI are nearly always underrepresented, usually significantly underrepresented, with regard to NJPs.

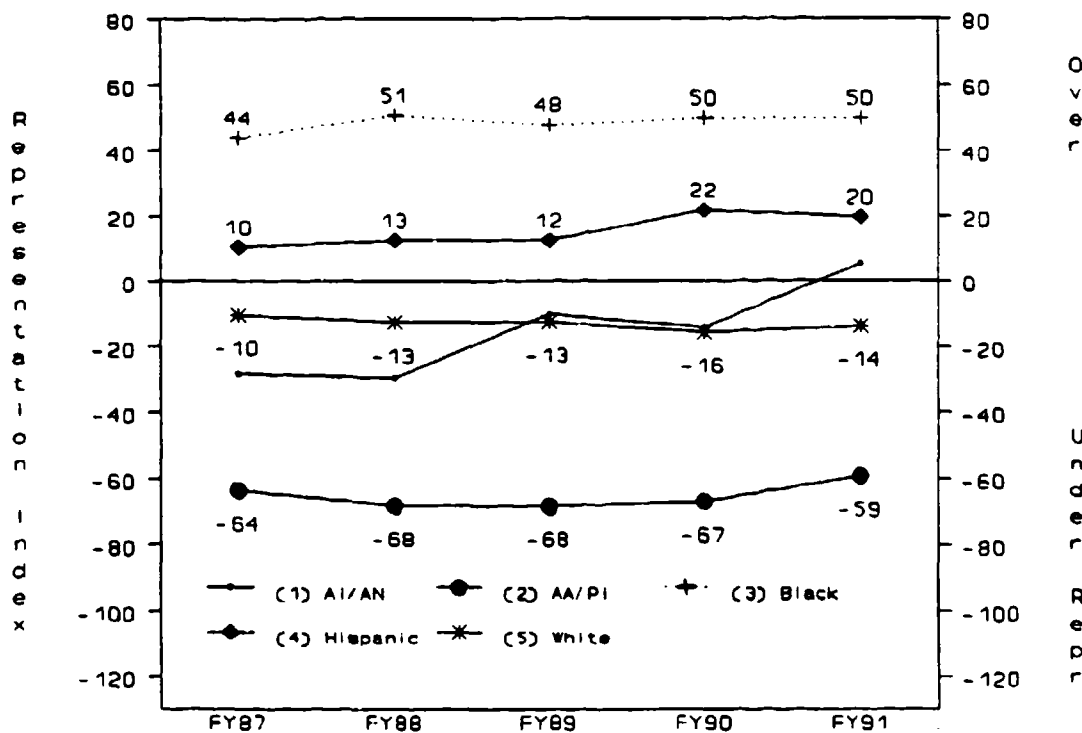


Figure 14. Representation of Racial/Ethnic Groups in Non-Judicial Punishments - Total DoD (FY87-FY91)

(2) The degree of minority overrepresentation in NJPs varies considerably between the different services. For all services, black service members have been consistently overrepresented among NJPs. Figure 15 shows the overrepresentation of black service members in NJPs for the different services. The figures in appendix A highlight the difference in minority representation among NJPs. The Air Force and the Navy have roughly the same degree of overrepresentation among black service members assessed NJPs. Also, the Army and the Marine Corps have the same degree and similar trends in the overrepresentation of black service members receiving NJPs. Among the services, both the Army and the Marine Corps have the highest percentage of black service members, 29 and 20 percent respectively. An increased tolerance or sensitivity to black issues and culture may partially explain the differences in NJP rates.

(3) In the Air Force, black service members are the only minority that has been consistently overrepresented with regards to NJPs. In the Army, the overrepresentation of black and hispanic service members among NJPs range between 20-30 percent. In the Marine Corps, black service members are the only minority that has been consistently overrepresented in NJPs. All minorities in the Navy with the exception of AA/PI are overrepresented in NJP actions. The percentage of overrepresentation is increasing for black and AI/NA service members.

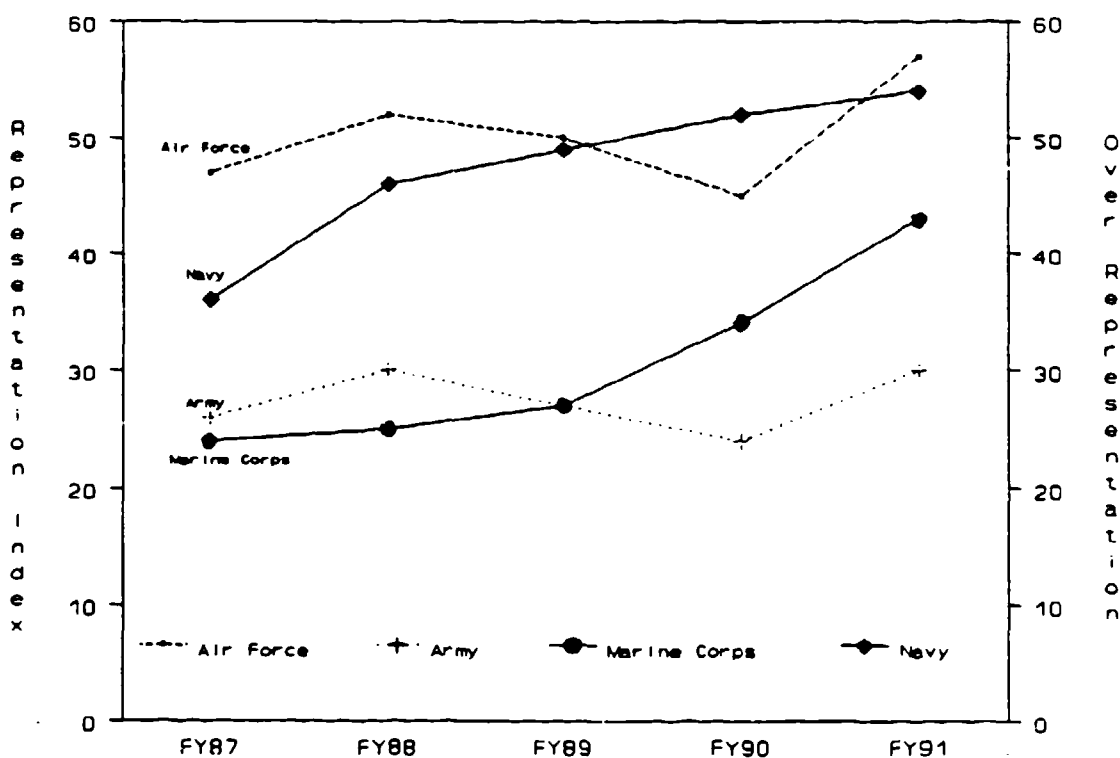


Figure 15. Overrepresentation of Black Service Members in Non-Judicial Punishments by Military Service (FY87-FY91)

## CHAPTER 4 - Conclusions

1. The total number of courts martial convictions has decreased significantly, by 48 percent, in the last five fiscal years (FY87-FY91). The percentage of courts martial convictions for all services and racial/ethnic groups has also decreased; however, the decline has varied considerably between racial/ethnic groups. The number and percent of the population being court martialed is decreasing faster for white service members as compared to black service members. This explains why the overrepresentation of black service members has increased steadily for the last 5 fiscal years. The overrepresentation of black service members has increased from 33 percent in FY87 to more than 74 percent in FY91. Black service members in FY91 were 2.2 times more likely to receive courts martial convictions than white service members. Black service members, representing 21.6 percent of the military population received 37.6 percent of the convictions resulting in 0.69 percent of the black military population being courts martialed. In comparison, white service members, representing 70.3 percent of the population, received 54.9 percent of the courts martial convictions, resulting in only 0.31 percent of the white military population being courts martialed. The remaining 8.1 percent of the population were other minorities, who received the remaining 7.5 percent of the courts martial convictions. The increased overrepresentation of blacks is not caused by an increase in the number of courts martial convictions among blacks, but rather results from the number of courts martial convictions of other racial/ethnic groups, particularly white service members whose number of convictions have decreased faster than the number of convictions among black service members.

2. The relative frequency of courts martial convictions is very low. In FY91, the average rate of convictions for all service members was equal to four-tenths of one percent (.4 percent or .004) of the total military population.

3. As with courts martials, the total number of NJPs has decreased significantly, by 47 percent, in the last five fiscal years (FY87-FY91). The percentage of NJPs for all services and racial/ethnic groups is decreasing. The decrease in NJPs has varied between racial/ethnic groups. The overrepresentation of black service members among NJPs has stayed relatively constant, at about 50 percent, for the last 4 fiscal years. However, in FY91 black service members were still 1.7 times more likely to receive NJPs than white service members. Black service members made up 21.6 percent of the military population and received 32.2 percent of the NJPs for a 7.81 percent NJP rate. White service members made up 70.3 percent of the population and received 60.2 percent of the NJPs for a 4.5 percent NJP rate. The remaining 8.1 percent of the population were other minorities, who received the remaining 7.6 percent of the NJPs. The representation of hispanic and AI/AN service members in NJPs has increased the most in the last five fiscal years.

4. The fact that the overrepresentation of black service members among courts martial convictions is greater than their overrepresentation among NJPs, suggests that blacks are involved in more serious offenses. This is supported by Nordlie, et al. (1979), who found that black service member were overrepresented in the commission of violent and confrontation crimes, while whites service members committed the majority of crimes against property, and military specific offenses.

5. Commanders have greater discretion over handling NJPs compared to court martial convictions. If the UCMJ system is racially biased, then one may expect that overrepresentation among blacks would be greater for NJP infractions as compared to courts martials. However, the data suggests just the opposite, the degree of overrepresentation among blacks is less with respect to NJPs and black overrepresentation is growing at slower rates than it is with courts martial convictions. Also, the percent of black service members being awarded NJPs is decreasing faster than other racial/ethnic groups. While, this does not definitively answer the question of whether the NJP system is racially unbiased, it tends to contradict claims that the NJP system is unfair.

6. The rate of courts martial convictions and Non-Judicial Punishments vary considerably from service to service. Undoubtedly this is a function of many different factors such as the way the different services administer discipline, tolerance to offenses, population characteristics of service member, etc. Further research into issues of discipline and disparities among service members should be a coordinated effort to insure that the conclusions and recommendations of studies of one service are applicable to the others.

## **APPENDIX A - CHI SQUARE TEST RESULTS**

## Appendix A - Chi Square Test Results

Hypothesis testing is used in this study to determine whether the difference in actual discipline data compared to what is expected, given the population parameters. In statistics, the null hypothesis states that there is no difference between/among actual data and expected data. Applying the null hypothesis to discipline data is the same as saying that, if race is not related in any way to courts martial convictions and NJPs, other factors being equal, then one would expect to find white and black service members receiving court martials and NJP in the same proportion as their total numbers in the military. Therefore, if 22% of service members are black, then one would expect that 22% of those court martialed would also be black. The first step in the analysis was the calculation to the Chi square test to determine whether the difference in proportions between/among actual and expected were statistically significant.

We first defined the expected punishments from each population subgroups as follows:

- $p_1$  = Expected punishments among AI/AN service members
- $p_2$  = Expected punishments among AA/PI service members
- $p_3$  = Expected punishments among black service members
- $p_4$  = Expected punishments among hispanic service members
- $p_5$  = Expected punishments among white service members
- $p_6$  = Expected punishments among other or unknown service members

Then the null hypothesis, for Air Force service members in FY91, which represents the overall population parameters for each of the racial/ethnic groups is:

$$H_0: p_1 = .007 \quad p_2 = .017 \quad p_3 = .151 \quad p_4 = .035 \quad p_5 = .782 \quad p_6 = .009$$

and the alternative is

$H_a$ : At least one of the expected percentages differs from its null hypothesized value.

The following formula was used to calculate the  $X^2$  test statistic for each service by fiscal year and discipline type.

$$\text{Test Statistic:} \quad X^2 = \sum \frac{[n_i - E(n_i)]^2}{E(n_i)}$$

where

$$\begin{aligned} E(n_1) &= np_{1,0} = 1,147(.007) = 8 \\ E(n_2) &= np_{2,0} = 1,147(.017) = 20 \\ E(n_3) &= np_{3,0} = 1,147(.151) = 173 \\ E(n_4) &= np_{4,0} = 1,147(.035) = 40 \\ E(n_5) &= np_{5,0} = 1,147(.782) = 897 \\ E(n_6) &= np_{6,0} = 1,147(.009) = 10 \end{aligned}$$

The  $X^2$  test statistic is calculated as follows:

$$X^2 = \frac{(8-8)^2}{8} + \frac{(9-20)^2}{20} + \frac{(346-173)^2}{173} + \frac{(41-40)^2}{40} + \frac{(736-897)^2}{897} + \frac{(7-10)^2}{10} = 210.0$$

Rejection region:

For  $\alpha = .01$  and degrees of freedom (df) =  $k-1 = 5$ , Reject  $H_0$  if  $X^2 > \chi^2_{.01}$  or 15.086

Since the value of the  $X^2$  statistic exceeds the table value  $\chi^2$  (15.086), the data provide sufficient evidence ( $\alpha = .01$ ) that the expected distribution is significantly different from the actual distribution of Air Force service members courts martialled. The following table summarizes the results of chi square test for the last five fiscal years by military service and discipline type. For each of the hypotheses tested the null hypothesis was rejected at the 99 percent confidence interval and therefore the expected distribution of discipline is significantly different from the actual distribution.

Chi Square ( $X^2$ ) Test Results

Service Discipline Type	Fiscal Year				
	91	90	89	88	87
<b>Air Force</b>					
Courts Martial Convictions	210	532	632	615	402
Non-Judicial Punishments	661	2,358	2,516	2,979	3,132
<b>Army</b>					
Courts Martial Convictions	354	348	515	347	209
Non-Judicial Punishments	2,417	3,220	3,430	4,369	3,642
<b>Marine Corps</b>					
Courts Martial Convictions	283	150	179	119	164
Non-Judicial Punishments	501	527	325	370	392
<b>Navy</b>					
Courts Martial Convictions	343	362	164	102	215
Non-Judicial Punishments	2,453	1,490	2,379	2,596	2,220

Note: For  $\alpha = .01$  and  $df = k-1 = 5$ , Reject  $H_0$  if  $X^2 > \chi^2_{.01}$  or 15.086

The following tables displays each of the services discipline data, population distribution and summary statistics for the last five fiscal years.

Air Force - Courts Martial Conviction				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI ^ 2
FY91	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	8	0.7%	3,372	0.7%	8	0.0
(2) AA/PI	9	0.8%	8,756	1.7%	20	5.9
(3) Blacks	346	30.2%	76,193	15.1%	173	173.9
(4) Hispanic	41	3.6%	17,458	3.5%	40	0.1
(5) White	736	64.2%	395,875	78.2%	897	29.0
(6) Other/Unknown	7	0.6%	4,372	0.9%	10	0.9
Total	1,147	100.0%	506,026	100.0%	1,147	210

Air Force - Courts Martial Conviction				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI ^ 2
FY90	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	12	0.8%	3,745	0.7%	11	0.1
(2) AA/PI	23	1.5%	9,062	1.7%	27	0.5
(3) Blacks	474	30.1%	81,283	15.3%	241	226.3
(4) Hispanic	48	3.0%	18,528	3.5%	55	0.9
(5) White	948	60.2%	414,885	78.0%	1,228	63.9
(6) Other/Unknown	70	4.4%	4,516	0.8%	13	239.9
Total	1,575	100.0%	532,019	100.0%	1,575	531.6

Air Force - Courts Martial Conviction				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI ^ 2
FY89	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	11	0.7%	4,083	0.7%	12	0.0
(2) AA/PI	17	1.1%	9,496	1.7%	27	3.7
(3) Blacks	531	32.9%	85,693	15.1%	244	336.5
(4) Hispanic	45	2.8%	19,457	3.4%	55	2.0
(5) White	944	58.5%	443,025	78.2%	1,263	80.5
(6) Other/Unknown	67	4.1%	4,776	0.8%	14	209.3
Total	1,615	100.0%	566,530	100.0%	1,615	632.1



Air Force - Courts Martial Conviction				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI^2
FY88	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	11	0.6%	4,432	0.8%	14	0.6
(2) AA/PI	20	1.1%	9,402	1.6%	30	3.2
(3) Blacks	602	33.3%	87,215	15.2%	275	387.4
(4) Hispanic	54	3.0%	19,684	3.4%	62	1.1
(5) White	1,060	58.7%	446,637	78.1%	1,410	87.0
(6) Other/Unknown	59	3.3%	4,613	0.8%	15	135.6
Total	1,806	100.0%	571,983	100.0%	1,806	614.8

Air Force - Courts Martial Conviction				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI^2
FY87	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	17	1.0%	4,709	0.8%	13	1.3
(2) AA/PI	18	1.1%	9,985	1.7%	27	3.3
(3) Blacks	477	28.8%	90,902	15.1%	250	205.4
(4) Hispanic	58	3.5%	20,656	3.4%	57	0.0
(5) White	1,033	62.3%	471,526	78.3%	1,298	54.2
(6) Other/Unknown	56	3.4%	4,806	0.8%	13	138.2
Total	1,659	100.0%	602,584	100.0%	1,659	402.4

Army - Courts Martial Convictions				SUMMARY STATISTICS		
FY91	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	5	0.2%	3,023	0.4%	11.1	3.3
(2) AA/PI	33	1.3%	9,868	1.4%	36.1	0.3
(3) Blacks	1,174	45.4%	202,842	28.7%	742.6	250.6
(4) Hispanic	89	3.4%	30,777	4.4%	112.7	5.0
(5) White	1,223	47.3%	440,396	62.4%	1,612.4	94.0
(6) Other/Unknown	61	2.4%	19,154	2.7%	70.1	1.2
Total	2,585	100.0%	706,060	100.0%	2,585.0	354.3

Army - Courts Martial Convictions				SUMMARY STATISTICS		
FY90	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	10	0.3%	3,045	0.4%	13.9	1.1
(2) AA/PI	27	0.8%	9,955	1.4%	45.5	7.5
(3) Blacks	1,453	43.7%	211,604	29.1%	966.1	245.4
(4) Hispanic	109	3.3%	30,964	4.3%	141.4	7.4
(5) White	1,664	50.0%	453,965	62.3%	2,072.7	80.6
(6) Other/Unknown	62	1.9%	18,719	2.6%	85.5	6.4
Total	3,325	100.0%	728,252	100.0%	3,325.0	348.4

Army - Courts Martial Convictions				SUMMARY STATISTICS		
FY89	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	14	0.4%	3,108	0.4%	14.8	0.0
(2) AA/PI	138	3.8%	10,011	1.3%	47.8	170.6
(3) Blacks	1,511	41.4%	217,149	28.4%	1,035.8	218.1
(4) Hispanic	128	3.5%	31,027	4.1%	148.0	2.7
(5) White	1,782	48.8%	485,015	63.4%	2,313.4	122.1
(6) Other/Unknown	78	2.1%	19,131	2.5%	91.3	1.9
Total	3,651	100.0%	765,441	100.0%	3,651.0	515.4

Army -- Courts Martial Convictions				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI ^ 2
FY88	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	13	0.3%	2,966	0.4%	16.5	0.7
(2) AA/PI	36	0.8%	9,549	1.2%	53.0	5.5
(3) Blacks	1,705	40.0%	212,157	27.6%	1,178.4	235.3
(4) Hispanic	133	3.1%	29,889	3.9%	166.0	6.6
(5) White	2,245	52.7%	494,346	64.4%	2,745.8	91.4
(6) Other/Unknown	132	3.1%	18,758	2.4%	104.2	7.4
Total	4,264	100.0%	767,665	100.0%	4,264.0	346.8

Army - Courts Martial Convictions				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI ^ 2
FY87	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	11	0.4%	2,864	0.4%	10.5	0.0
(2) AA/PI	14	0.5%	9,353	1.2%	34.2	11.9
(3) Blacks	1,106	39.0%	211,127	27.2%	771.2	145.3
(4) Hispanic	89	3.1%	29,277	3.8%	106.9	3.0
(5) White	1,552	54.7%	506,629	65.2%	1,850.6	48.2
(6) Other/Unknown	65	2.3%	17,420	2.2%	63.6	0.0
Total	2,837	100.0%	776,670	100.0%	2,837.0	208.5

Marine Corps - Courts Martial Convictions					SUMMARY STATISTICS	
FY91	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	11	0.6%	1,488	0.9%	14.8	1.0
(2) AA/PI	19	1.1%	2,520	1.4%	25.1	1.5
(3) Blacks	620	35.8%	34,781	20.0%	345.8	217.4
(4) Hispanic	141	8.1%	13,200	7.6%	131.2	0.7
(5) White	930	53.7%	120,512	69.2%	1,198.3	60.1
(6) Other/Unknown	10	0.6%	1,590	0.9%	15.8	2.1
Total	1,731	100.0%	174,091	100.0%	1,731.0	282.7

Marine Corps - Courts Martial Convictions					SUMMARY STATISTICS	
FY90	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	15	0.7%	1,462	0.8%	18.5	0.7
(2) AA/PI	16	0.7%	2,487	1.4%	31.5	7.6
(3) Blacks	686	30.7%	36,460	20.7%	462.0	108.6
(4) Hispanic	175	7.8%	12,890	7.3%	163.3	0.8
(5) White	1,334	59.6%	121,661	68.9%	1,541.6	27.9
(6) Other/Unknown	11	0.5%	1,585	0.9%	20.1	4.1
Total	2,237	100.0%	176,545	100.0%	2,237.0	149.8

Marine Corps - Courts Martial Convictions					SUMMARY STATISTICS	
FY89	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	25	0.9%	1,457	0.8%	22.1	0.4
(2) AA/PI	40	1.5%	2,369	1.3%	35.9	0.5
(3) Blacks	837	31.0%	37,075	20.8%	562.6	133.9
(4) Hispanic	190	7.0%	12,138	6.8%	184.2	0.2
(5) White	1,587	58.7%	123,374	69.3%	1,872.0	43.4
(6) Other/Unknown	23	0.9%	1,660	0.9%	25.2	0.2
Total	2,702	100.0%	178,073	100.0%	2,702.0	178.5

Marine Corps - Courts Martial Convictions				SUMMARY STATISTICS		
FY88	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	6	0.3%	1,270	0.7%	16.4	6.6
(2) AA/PI	14	0.6%	2,108	1.2%	27.2	6.4
(3) Blacks	680	29.6%	37,274	20.9%	480.4	82.9
(4) Hispanic	152	6.6%	10,762	6.0%	138.7	1.3
(5) White	1,421	61.8%	124,387	69.8%	1,603.2	20.7
(6) Other/Unknown	25	1.1%	2,495	1.4%	32.2	1.6
Total	2,298	100.0%	178,296	100.0%	2,298.0	119.4

Marine Corps - Courts Martial Convictions				SUMMARY STATISTICS		
FY87	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	14	0.5%	1,223	0.7%	18.3	1.0
(2) AA/PI	17	0.6%	1,948	1.1%	29.1	5.1
(3) Blacks	774	28.7%	37,423	20.8%	559.8	82.0
(4) Hispanic	210	7.8%	9,978	5.5%	149.3	24.7
(5) White	1,674	62.1%	127,156	70.5%	1,902.1	27.3
(6) Other/Unknown	8	0.3%	2,571	1.4%	38.5	24.1
Total	2,697	100.0%	180,299	100.0%	2,697.0	164.2

Navy - Courts Martial Convictions				SUMMARY STATISTICS		
FY91	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	12	0.6%	2,882	0.6%	11.8	0.0
(2) AA/PI	21	1.0%	23,128	4.7%	94.6	57.2
(3) Blacks	645	31.9%	87,488	17.7%	57.8	237.6
(4) Hispanic	168	8.3%	32,101	6.5%	131.3	10.3
(5) White	1,172	58.0%	346,888	70.2%	1,418.5	42.8
(6) Other/Unknown	4	0.2%	1,983	0.4%	8.1	2.1
Total	2,022	100.0%	494,470	100.0%	2,022.0	343.1

Navy - Courts Martial Convictions				SUMMARY STATISTICS		
FY90	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	6	0.4%	2,871	0.6%	9.0	1.0
(2) AA/PI	10	0.6%	23,233	4.6%	72.8	54.1
(3) Blacks	549	34.9%	88,591	17.7%	277.5	265.6
(4) Hispanic	99	6.3%	30,326	6.0%	95.0	0.2
(5) White	905	57.6%	354,409	70.7%	1,110.1	37.9
(6) Other/Unknown	2	0.1%	2,112	0.4%	6.6	3.2
Total	1,571	100.0%	501,542	100.0%	1,571.0	362.1

Navy - Courts Martial Convictions				SUMMARY STATISTICS		
FY89	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	20	1.0%	2,981	0.6%	11.5	6.3
(2) AA/PI	26	1.3%	23,435	4.6%	90.3	45.8
(3) Blacks	514	25.9%	86,982	16.9%	335.2	95.4
(4) Hispanic	127	6.4%	28,578	5.6%	110.1	2.6
(5) White	1,288	65.0%	370,050	71.9%	1,426.0	13.3
(6) Other/Unknown	7	0.4%	2,319	0.5%	8.9	0.4
Total	1,982	100.0%	514,345	100.0%	1,982.0	163.9

Navy - Courts Martial Convictions				SUMMARY STATISTICS		
FY88	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	21	0.6%	2,888	0.6%	18.5	0.3
(2) AA/PI	65	1.9%	23,385	4.5%	149.6	47.8
(3) Blacks	685	20.4%	81,524	15.5%	521.5	51.2
(4) Hispanic	161	4.8%	25,795	4.9%	165.0	0.1
(5) White	2,406	71.7%	388,036	74.0%	2,482.3	2.3
(6) Other/Unknown	16	0.5%	2,670	0.5%	17.1	0.1
Total	3,354	100.0%	524,298	100.0%	3,354.0	101.9

Navy - Courts Martial Convictions				SUMMARY STATISTICS		
FY87	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	53	0.7%	2,910	0.6%	39.0	5.0
(2) AA/PI	20	0.3%	3,731	0.7%	50.1	18.1
(3) Blacks	1,299	18.3%	78,561	14.9%	1,054.1	56.9
(4) Hispanic	311	4.4%	24,018	4.5%	322.3	0.4
(5) White	5,301	74.8%	396,139	75.0%	5,315.3	0.0
(6) Other/Unknown	104	1.5%	22,895	4.3%	307.2	134.4
Total	7,088	100.0%	528,254	100.0%	7,088.0	214.8

Air Force - Non - Judicial Punishment (NJP)				SUMMARY STATISTICS		
FY91	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI <sup>2</sup> Convictions
(1) AI/AN	64	0.6%	3,372	0.7%	72	0.9
(2) AA/PI	92	0.8%	8,756	1.7%	187	48.5
(3) Blacks	2,554	23.6%	76,193	15.1%	1,630	523.2
(4) Hispanic	337	3.1%	17,458	3.5%	374	3.6
(5) White	7,668	70.8%	395,875	78.2%	8,471	76.1
(6) Other/Unknown	113	1.0%	4,372	0.9%	94	9.0
Total	10,828	100.0%	506,026	100.0%	10,828	661

Air Force - Non - Judicial Punishment (NJP)				SUMMARY STATISTICS		
FY90	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI <sup>2</sup> Convictions
(1) AI/AN	83	0.6%	3,745	0.7%	101	3.3
(2) AA/PI	135	0.9%	9,062	1.7%	245	49.3
(3) Blacks	3,194	22.2%	81,283	15.3%	2,196	453.1
(4) Hispanic	525	3.7%	18,528	3.5%	501	1.2
(5) White	9,863	68.6%	414,885	78.0%	11,211	162.0
(6) Other/Unknown	576	4.0%	4,516	0.8%	122	1,688.8
Total	14,376	100.0%	532,019	100.0%	14,376	2,357.8

Air Force - Non - Judicial Punishment (NJP)				SUMMARY STATISTICS		
FY89	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI <sup>2</sup> Convictions
(1) AI/AN	96	0.6%	4,083	0.7%	113	2.5
(2) AA/PI	141	0.9%	9,496	1.7%	263	56.3
(3) Blacks	3,564	22.8%	85,693	15.1%	2,369	602.8
(4) Hispanic	484	3.1%	19,457	3.4%	538	5.4
(5) White	10,775	68.8%	443,025	78.2%	12,248	177.1
(6) Other/Unknown	602	3.8%	4,776	0.8%	132	1,672.8
Total	15,662	100.0%	566,530	100.0%	15,662	2,516.8



Air Force - Non - Judicial Punishment (NJP)				SUMMARY STATISTICS		
FY88	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	108	0.6%	4,432	0.8%	143	8.8
(2) AA/PI	182	1.0%	9,402	1.6%	304	49.1
(3) Blacks	4,298	23.2%	87,215	15.2%	2,823	771.1
(4) Hispanic	564	3.0%	19,684	3.4%	637	8.4
(5) White	12,675	68.5%	446,637	78.1%	14,455	219.2
(6) Other/Unknown	685	3.7%	4,613	0.8%	149	1,922.2
Total	18,512	100.0%	571,983	100.0%	18,512	2,978.8

Air Force - Non - Judicial Punishment (NJP)				SUMMARY STATISTICS		
FY87	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	137	0.7%	4,709	0.8%	158	2.7
(2) AA/PI	185	0.9%	9,985	1.7%	335	66.9
(3) Blacks	4,480	22.2%	90,902	15.1%	3,046	675.1
(4) Hispanic	656	3.2%	20,656	3.4%	692	1.9
(5) White	13,981	69.2%	471,526	78.3%	15,800	209.5
(6) Other/Unknown	753	3.7%	4,806	0.8%	161	2,175.6
Total	20,192	100.0%	602,584	100.0%	20,192	3,131.7

Army Non - Judicial Punishments (NJP)				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI^2
FY91	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	145	0.3%	3,023	0.4%	205.6	17.9
(2) AA/PI	233	0.5%	9,868	1.4%	671.2	286.1
(3) Blacks	17,935	37.3%	202,842	28.7%	13,797.9	1,240.5
(4) Hispanic	2,562	5.3%	30,777	4.4%	2,093.5	104.8
(5) White	26,563	55.3%	440,496	62.4%	29,963.8	386.0
(6) Other/Unknown	597	1.2%	19,154	2.7%	1,302.9	382.5
Total	48,035	100.0%	706,160	100.0%	48,035.0	2,417.7

Army Non - Judicial Punishments (NJP)				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI^2
FY90	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	220	0.3%	3,045	0.4%	321.1	31.9
(2) AA/PI	342	0.4%	9,955	1.4%	1,049.9	477.3
(3) Blacks	27,737	36.1%	211,604	29.1%	22,317.4	1,316.1
(4) Hispanic	4,381	5.7%	30,964	4.3%	3,265.7	380.9
(5) White	43,280	56.3%	453,965	62.3%	47,878.6	441.7
(6) Other/Unknown	847	1.1%	18,719	2.6%	1,974.2	643.6
Total	76,807	100.0%	728,252	100.0%	76,807.0	3,291.5

Army Non - Judicial Punishments (NJP)				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI^2
FY89	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	242	0.3%	3,108	0.4%	338.7	27.6
(2) AA/PI	358	0.4%	10,011	1.3%	1,090.9	492.4
(3) Blacks	29,977	35.9%	217,149	28.4%	23,663.5	1,684.4
(4) Hispanic	4,001	4.8%	31,027	4.1%	3,381.1	113.6
(5) White	47,914	57.4%	485,015	63.4%	52,853.9	461.7
(6) Other/Unknown	921	1.1%	19,131	2.5%	2,084.8	649.7
Total	83,413	100.0%	765,441	100.0%	83,413.0	3,429.5

Army Non - Judicial Punishments (NJP)				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI ^ 2
FY88	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	214	0.2%	2,966	0.4%	355.1	56.1
(2) AA/PI	393	0.4%	9,549	1.2%	1,143.3	492.4
(3) Blacks	33,119	36.0%	212,157	27.6%	25,402.2	2,344.2
(4) Hispanic	4,194	4.6%	29,889	3.9%	3,578.7	105.8
(5) White	53,029	57.7%	494,346	64.4%	59,189.6	641.2
(6) Other/Unknown	966	1.1%	18,758	2.4%	2,246.0	729.4
Total	91,915	100.0%	767,665	100.0%	91,915.0	4,369.2

Army Non - Judicial Punishments (NJP)				SUMMARY STATISTICS		
	Number	%		%	Expected	Sum CHI ^ 2
FY87	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	240	0.2%	2,864	0.4%	368.3	44.7
(2) AA/PI	358	0.4%	9,353	1.2%	1,202.9	593.4
(3) Blacks	34,340	34.4%	211,127	27.2%	27,152.6	1,902.5
(4) Hispanic	4,442	4.4%	29,277	3.8%	3,765.3	121.6
(5) White	59,266	59.3%	506,629	65.2%	65,156.6	532.5
(6) Other/Unknown	1,240	1.2%	17,420	2.2%	2,240.4	446.7
Total	99,886	100.0%	776,670	100.0%	99,886.0	3,641.5

Marine Corps - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
FY91	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	97	0.9%	1,488	0.9%	87.7	1.0
(2) AA/PI	85	0.8%	2,520	1.4%	148.6	27.2
(3) Blacks	2,928	28.5%	34,781	20.0%	2,050.8	375.2
(4) Hispanic	788	7.7%	13,200	7.6%	778.3	0.1
(5) White	6,273	61.1%	120,512	69.2%	7,105.8	97.6
(6) Other/Unknown	94	0.9%	1,590	0.9%	93.8	0.0
Total	10,265	100.0%	174,091	100.0%	10,265.0	501.1

Marine Corps - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
FY90	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	86	0.8%	1,462	0.8%	92.8	0.5
(2) AA/PI	91	0.8%	2,487	1.4%	157.9	28.4
(3) Blacks	3,134	28.0%	36,460	20.7%	2,315.1	289.7
(4) Hispanic	774	6.9%	12,890	7.3%	818.5	2.4
(5) White	6,914	61.7%	121,661	68.9%	7,725.1	85.2
(6) Other/Unknown	211	1.9%	1,585	0.9%	100.6	121.0
Total	11,210	100.0%	176,545	100.0%	11,210.0	527.1

Marine Corps - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
FY89	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	145	1.0%	1,457	0.8%	123.1	3.9
(2) AA/PI	107	0.7%	2,369	1.3%	200.1	43.3
(3) Blacks	3,973	26.4%	37,075	20.8%	3,132.2	225.7
(4) Hispanic	972	6.5%	12,138	6.8%	1,025.4	2.8
(5) White	9,730	64.7%	123,374	69.3%	10,422.9	46.1
(6) Other/Unknown	117	0.8%	1,660	0.9%	140.2	3.9
Total	15,044	100.0%	178,073	100.0%	15,044.0	325.7

Marine Corps - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
FY88	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	39	0.3%	1,270	0.7%	94.5	32.6
(2) AA/PI	75	0.6%	2,108	1.2%	156.9	42.7
(3) Blacks	3,462	26.1%	37,274	20.9%	2,774.2	170.5
(4) Hispanic	980	7.4%	10,762	6.0%	801.0	40.0
(5) White	8,614	64.9%	124,387	69.8%	9,257.7	44.8
(6) Other/Unknown	100	0.8%	2,495	1.4%	185.7	39.5
Total	13,270	100.0%	178,296	100.0%	13,270.0	370.2

Marine Corps - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
FY87	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	67	0.4%	1,223	0.7%	104.1	13.2
(2) AA/PI	80	0.5%	1,948	1.1%	165.8	44.4
(3) Blacks	3,952	25.8%	37,423	20.8%	3,184.4	185.0
(4) Hispanic	1,096	7.1%	9,978	5.5%	849.0	71.8
(5) White	9,913	64.6%	127,156	70.5%	10,820.0	76.0
(6) Other/Unknown	234	1.5%	2,571	1.4%	218.8	1.1
Total	15,342	100.0%	180,299	100.0%	15,342.0	391.5

Navy - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
	Number	%		%	Expected	Sum CHI^2
FY91	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	286	1.0%	2,882	0.6%	169.3	80.5
(2) AA/PI	521	1.8%	23,128	4.7%	1,358.5	516.3
(3) Blacks	7,936	27.3%	87,488	17.7%	5,139.0	1,522.3
(4) Hispanic	2,147	7.4%	32,101	6.5%	1,885.6	36.2
(5) White	18,112	62.4%	346,888	70.2%	20,376.1	251.6
(6) Other/Unknown	43	0.1%	1,983	0.4%	116.5	46.4
Total	29,045	100.0%	494,470	100.0%	29,045.0	2,453.3

Navy - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
	Number	%		%	Expected	Sum CHI^2
FY90	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	195	1.1%	2,871	0.6%	106.0	74.8
(2) AA/PI	352	1.9%	23,233	4.6%	857.6	298.1
(3) Blacks	4,961	26.8%	88,591	17.7%	3,270.1	874.3
(4) Hispanic	1,355	7.3%	30,326	6.0%	1,119.4	49.6
(5) White	11,620	62.8%	354,409	70.7%	13,082.0	163.4
(6) Other/Unknown	30	0.2%	2,112	0.4%	78.0	29.5
Total	18,513	100.0%	501,542	100.0%	18,513.0	1,489.7

Navy - Non-Judicial Punishments (NJP)					SUMMARY STATISTICS	
	Number	%		%	Expected	Sum CHI^2
FY89	Convicted	Total	Population	Total	Convictions	Convictions
(1) AI/AN	276	0.8%	2,981	0.6%	195.1	33.6
(2) AA/PI	439	1.3%	23,435	4.6%	1,533.6	781.2
(3) Blacks	8,508	25.3%	86,982	16.9%	5,692.0	1,393.2
(4) Hispanic	2,023	6.0%	28,578	5.6%	1,870.1	12.5
(5) White	22,287	66.2%	370,050	71.9%	24,215.5	153.6
(6) Other/Unknown	125	0.4%	2,319	0.5%	151.8	4.7
Total	33,658	100.0%	514,345	100.0%	33,658.0	2,378.8

Navy - Non-Judicial Punishments (NJP)				SUMMARY STATISTICS		
FY88	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	281	0.7%	2,888	0.6%	226.9	12.9
(2) AA/PI	472	1.1%	23,385	4.5%	1,837.4	1,014.6
(3) Blacks	9,340	22.7%	81,524	15.5%	6,405.3	1,344.6
(4) Hispanic	2,436	5.9%	25,795	4.9%	2,026.7	82.7
(5) White	28,505	69.2%	388,036	74.0%	30,487.9	129.0
(6) Other/Unknown	160	0.4%	2,670	0.5%	209.8	11.8
Total	41,194	100.0%	524,298	100.0%	41,194.0	2,595.5

Navy - Non-Judicial Punishments (NJP)				SUMMARY STATISTICS		
FY87	Number Convicted	% Total	Population	% Total	Expected Convictions	Sum CHI ^ 2 Convictions
(1) AI/AN	306	0.6%	2,910	0.6%	270.9	4.5
(2) AA/PI	193	0.4%	3,731	0.7%	347.4	68.6
(3) Blacks	9,917	20.2%	78,561	14.9%	7,314.1	926.3
(4) Hispanic	2,444	5.0%	24,018	4.5%	2,236.1	19.3
(5) White	35,767	72.7%	396,139	75.0%	36,881.0	33.6
(6) Other/Unknown	554	1.1%	22,895	4.3%	2,131.5	1,167.5
Total	49,181	100.0%	528,254	100.0%	49,181.0	2,219.9

## **APPENDIX B - INDIVIDUAL SERVICE FIGURES**



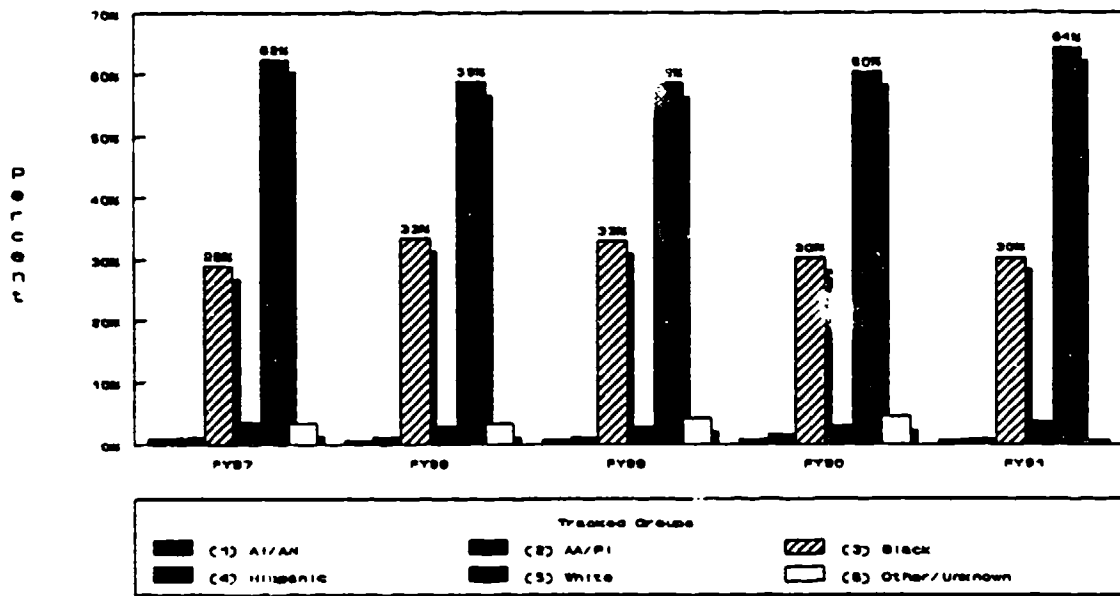


Figure A-1. Percentage of Courts Martial Convictions by Racial/Ethnic Group - Air Force (FY87-FY91)

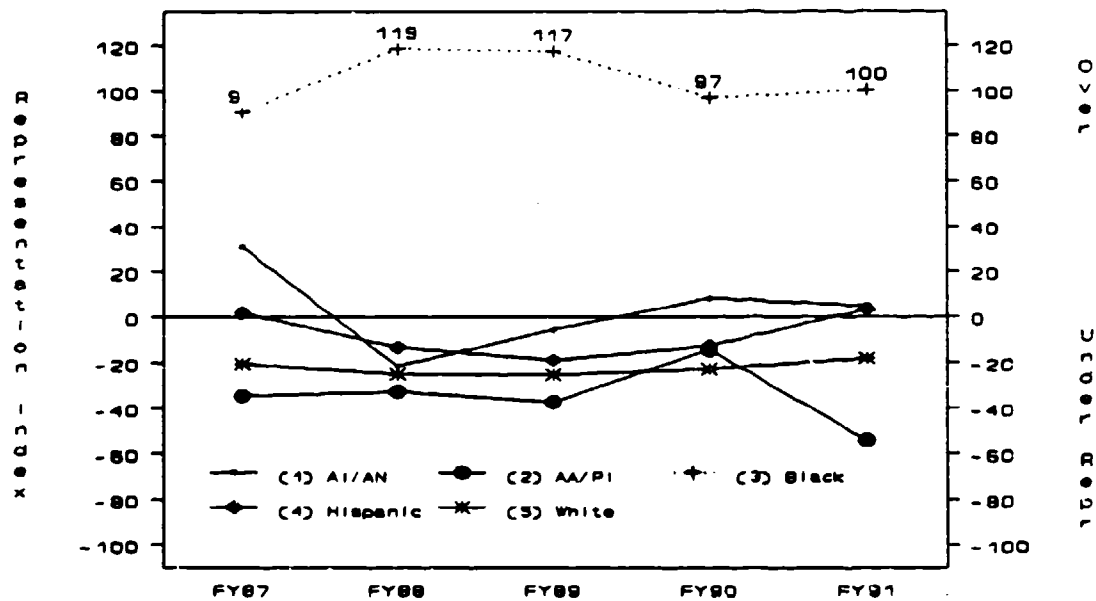


Figure A-2. Representation of Racial/Ethnic Groups in Courts Martial Convictions - Air Force (FY87-FY91)

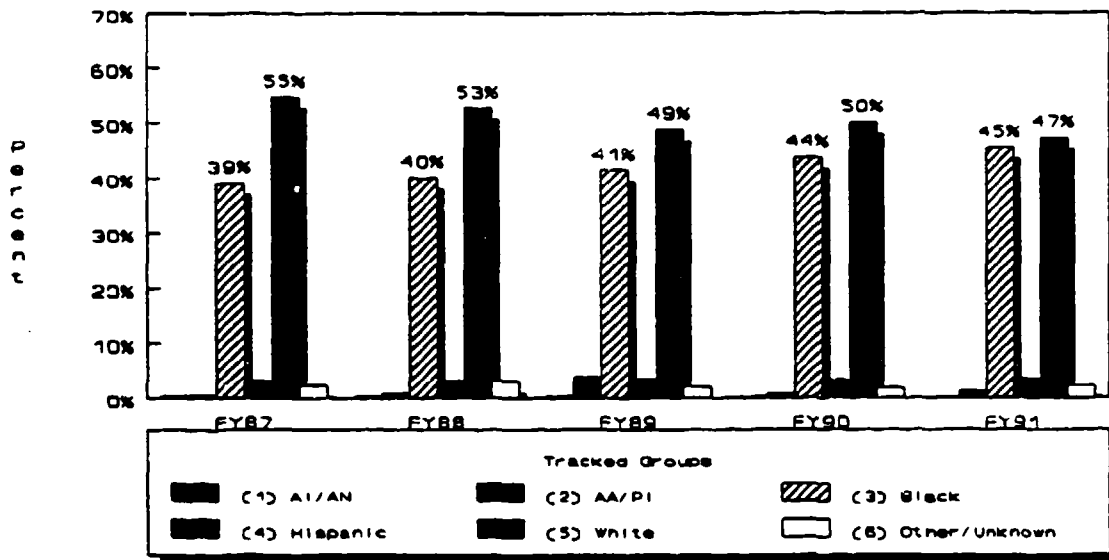


Figure A-3. Percentage of Courts Martial Convictions by Racial/Ethnic Group - Army (FY87-FY91)

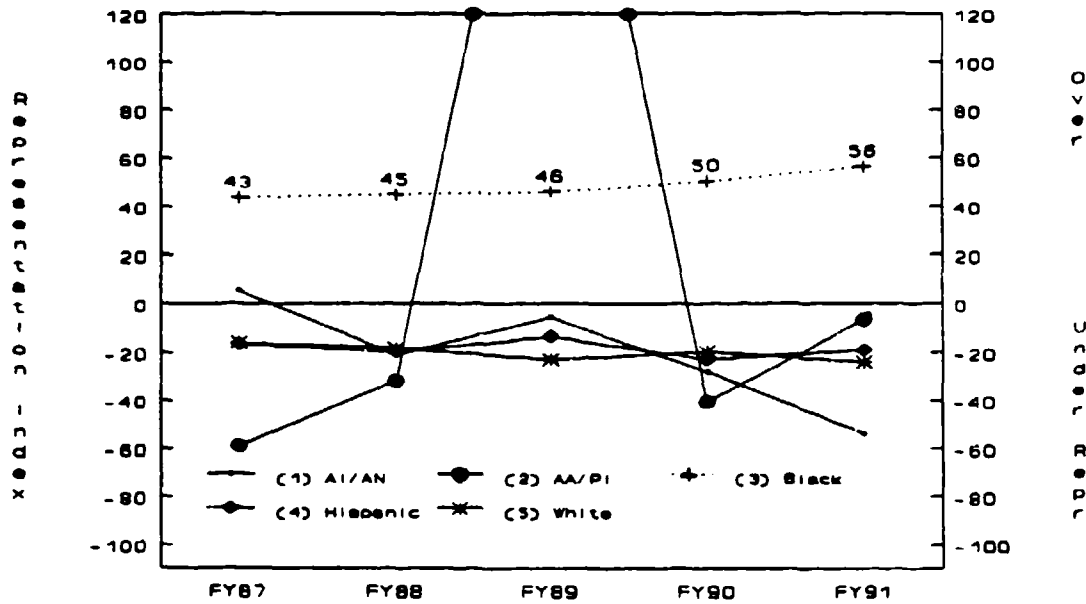


Figure A-4. Representation of Racial/Ethnic Groups in Courts Martial Convictions - Army (FY87-FY91)

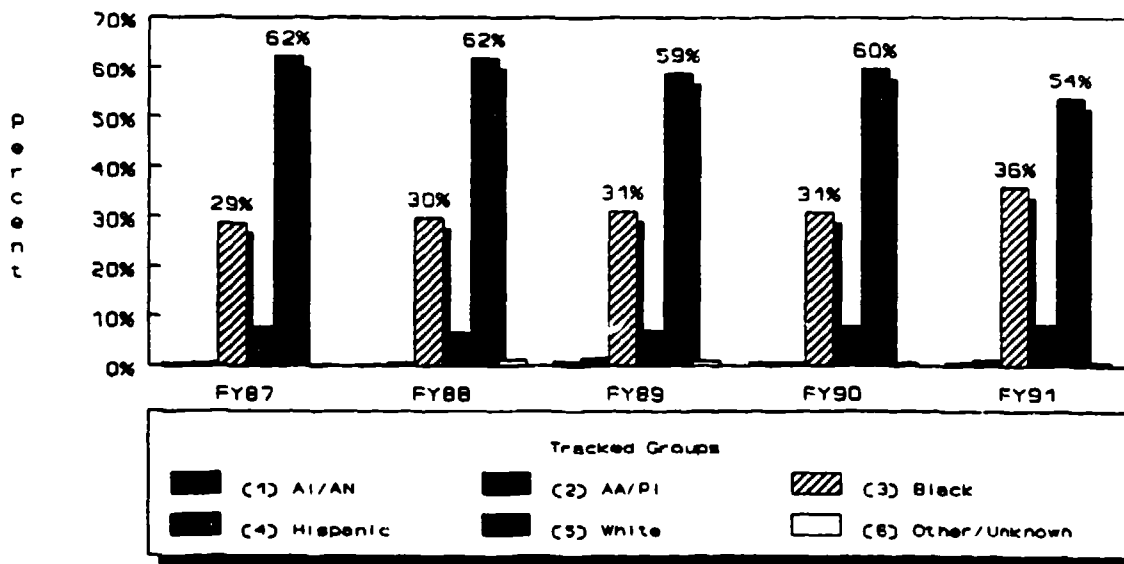


Figure A-5. Percentage of Courts Martial Convictions by Racial/Ethnic Group - Marine Corps (FY87-FY91)

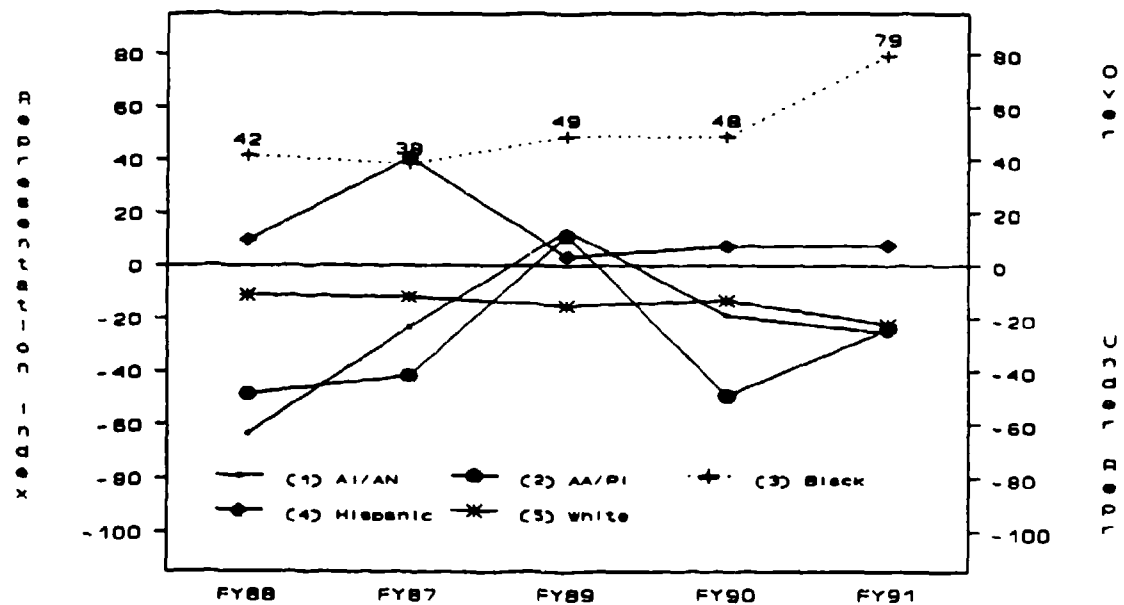


Figure A-6. Representation of Racial/Ethnic Groups in Courts Martial Convictions - Marine Corps (FY87-FY91)

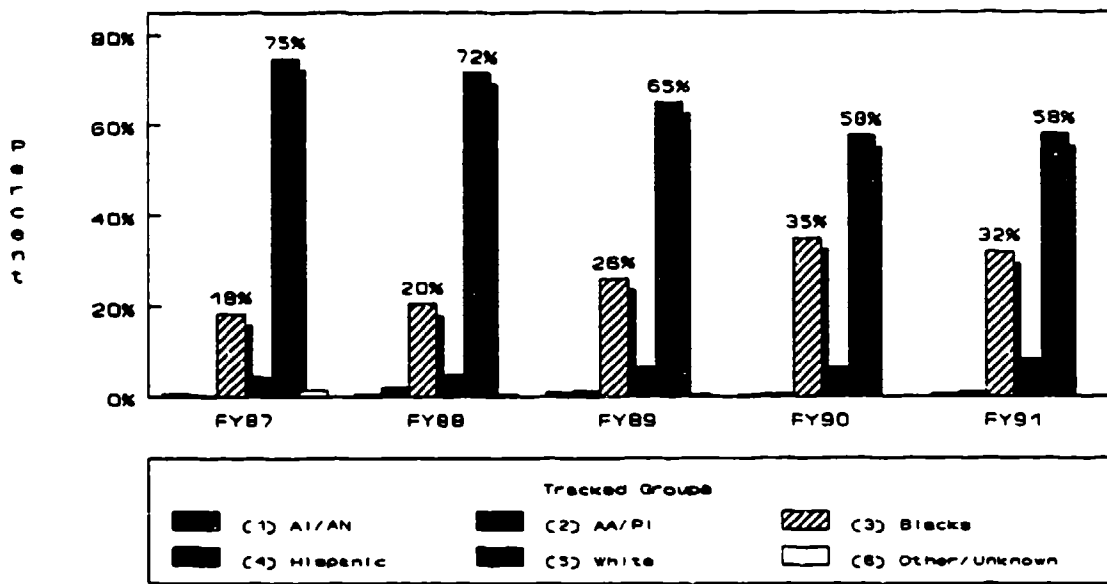


Figure A-7. Percentage of Courts Martial Convictions by Racial/Ethnic Group - Navy (FY87-FY91)

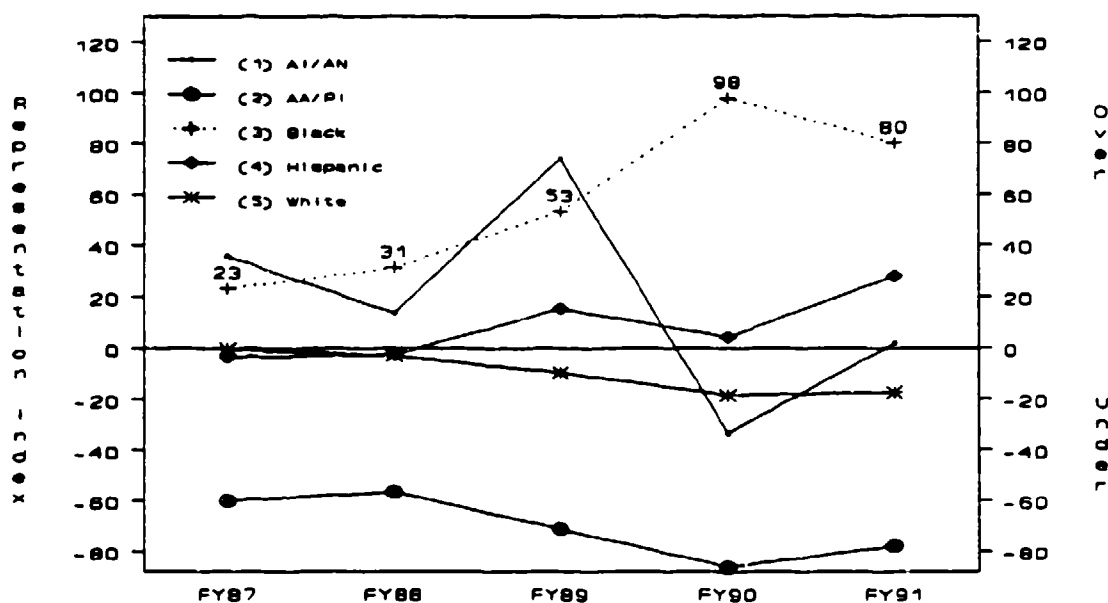


Figure A-8. Representation of Racial/Ethnic Groups in Courts Martial Convictions - Navy (FY87-FY91)

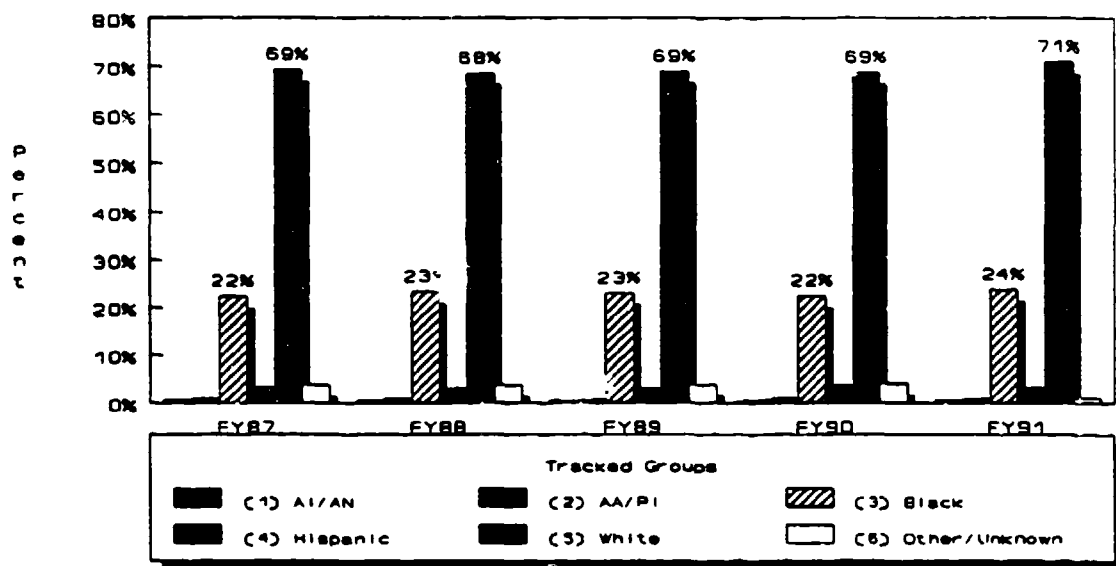


Figure A-9. Percentage of Non-Judicial Punishments Received by Racial/Ethnic Group - Air Force (FY87-FY91)

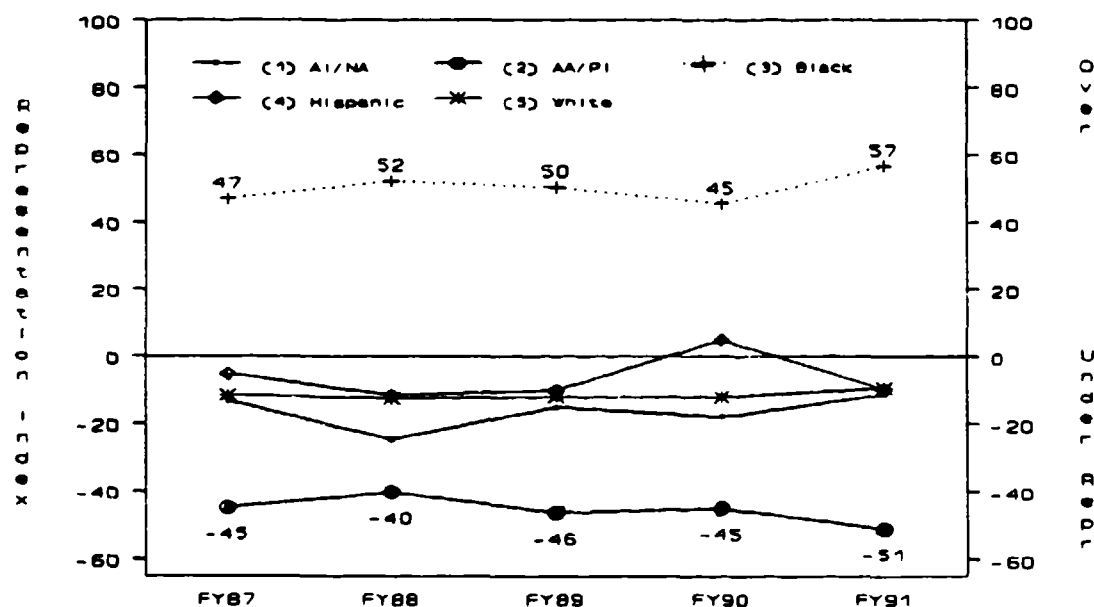


Figure A-10. Representation of Racial/Ethnic Groups in Judicial Punishments - Air Force (FY87-FY91)

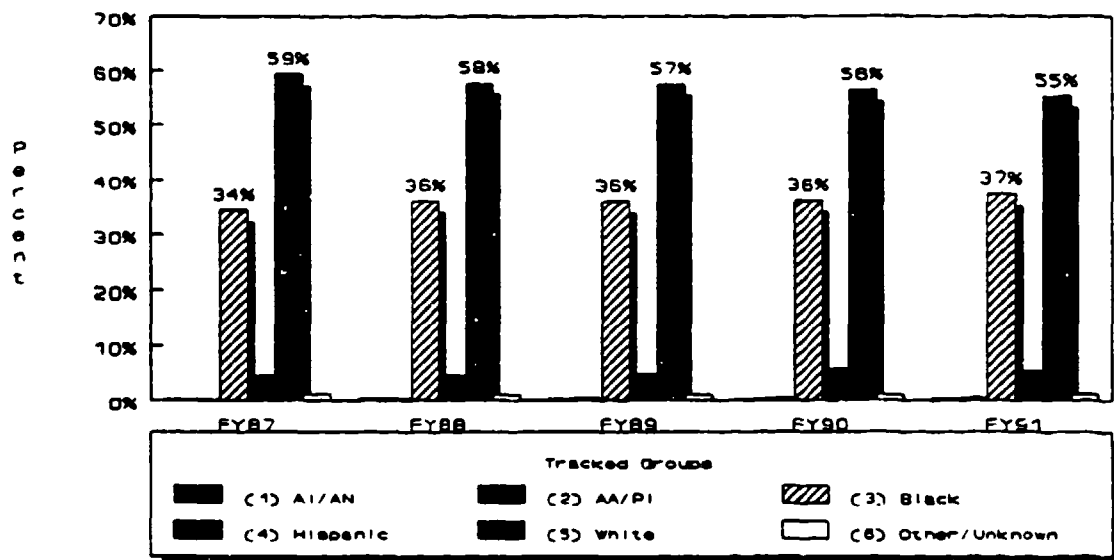


Figure A-11. Percentage of Non-Judicial Punishments Received by Racial/Ethnic Group - Army (FY87-FY91)

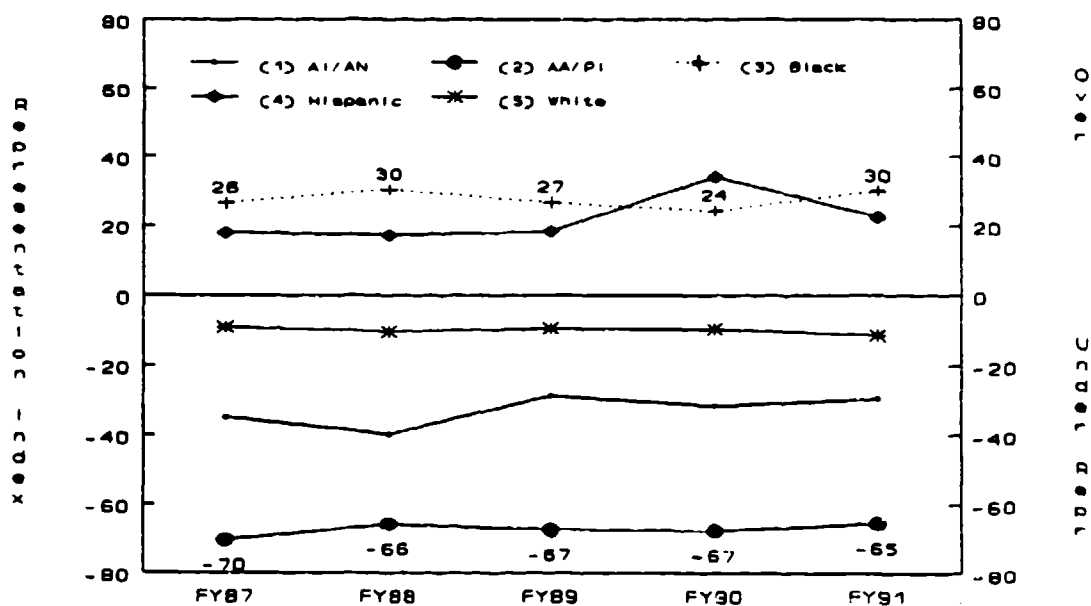


Figure A-12. Representation of Racial/Ethnic Groups in Non-Judicial Punishments - Army (FY87-FY91)

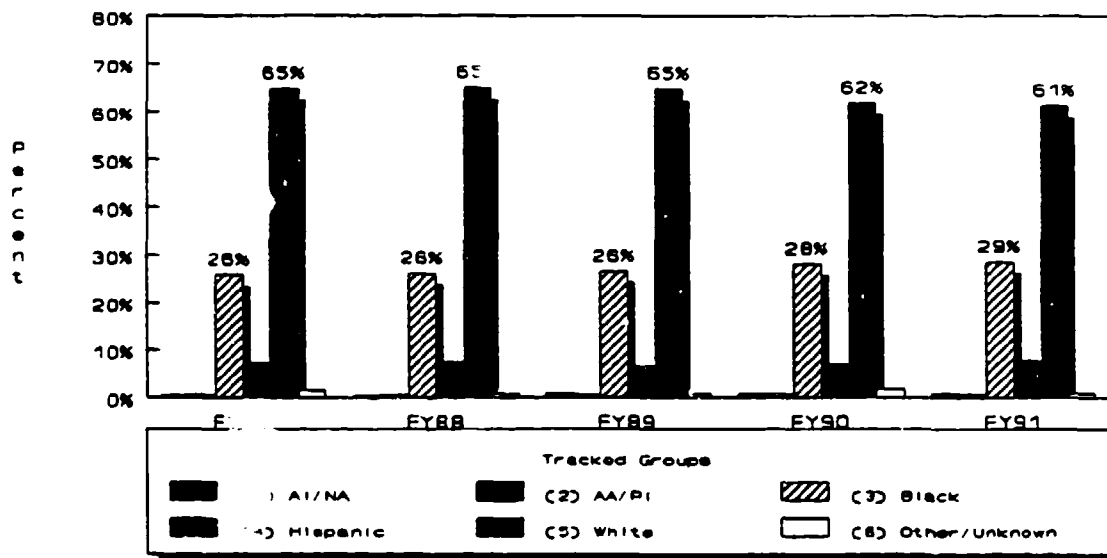


Fig. A-13. Percentage of Non-Judicial Punishments Received by Racial/Ethnic Group - Marine Corps (FY87-FY91)

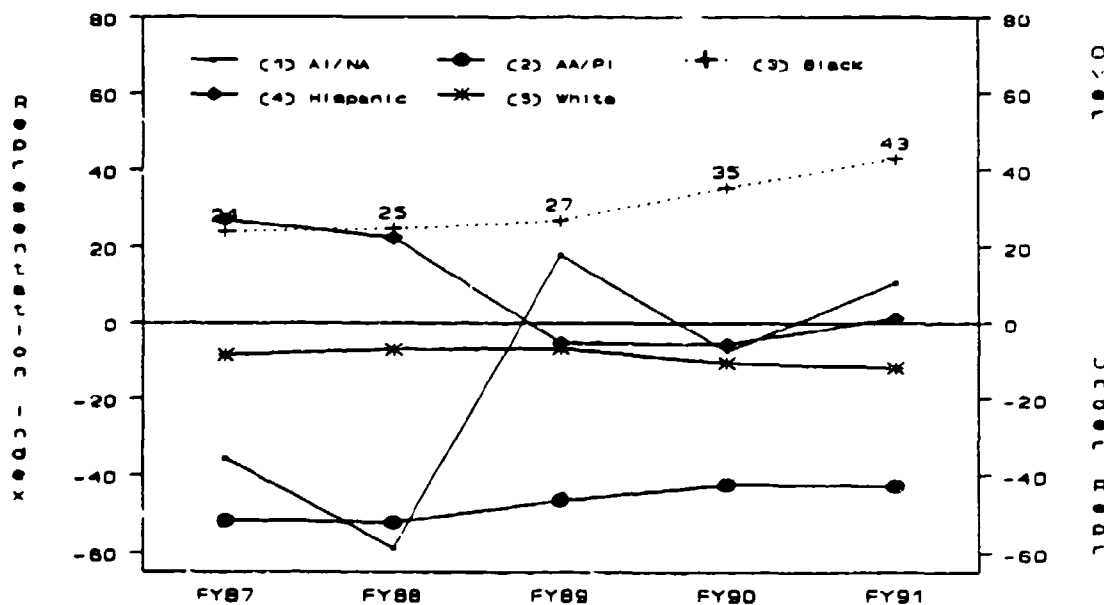


Figure A-14. Representation of Racial/Ethnic Groups in Non-Judicial Punishments - Marine Corps (FY87-FY91)

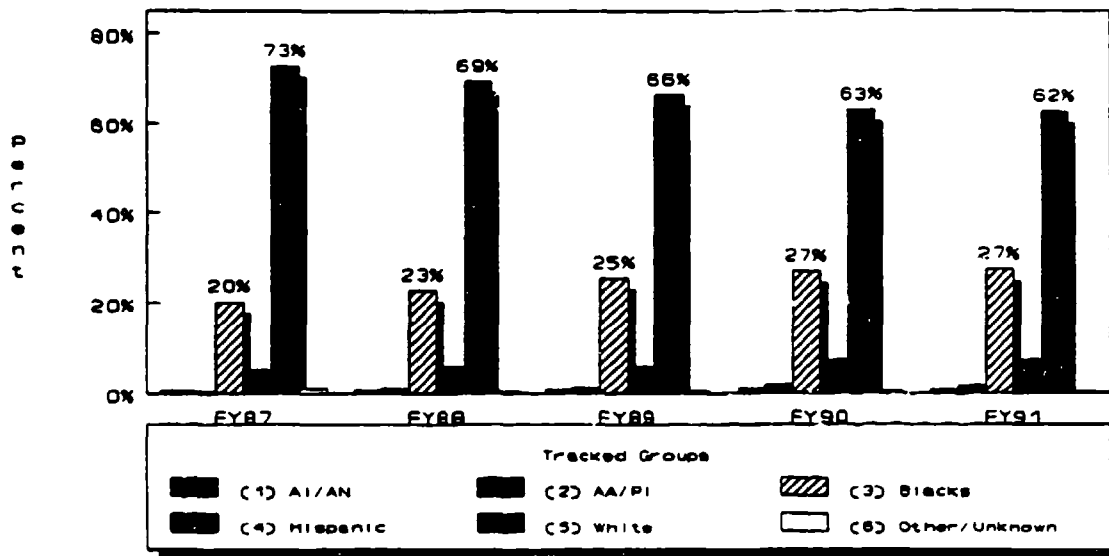


Figure A-15. Percentage of Non-Judicial Punishments Received by Racial/Ethnic Group - Navy (FY87-FY91)

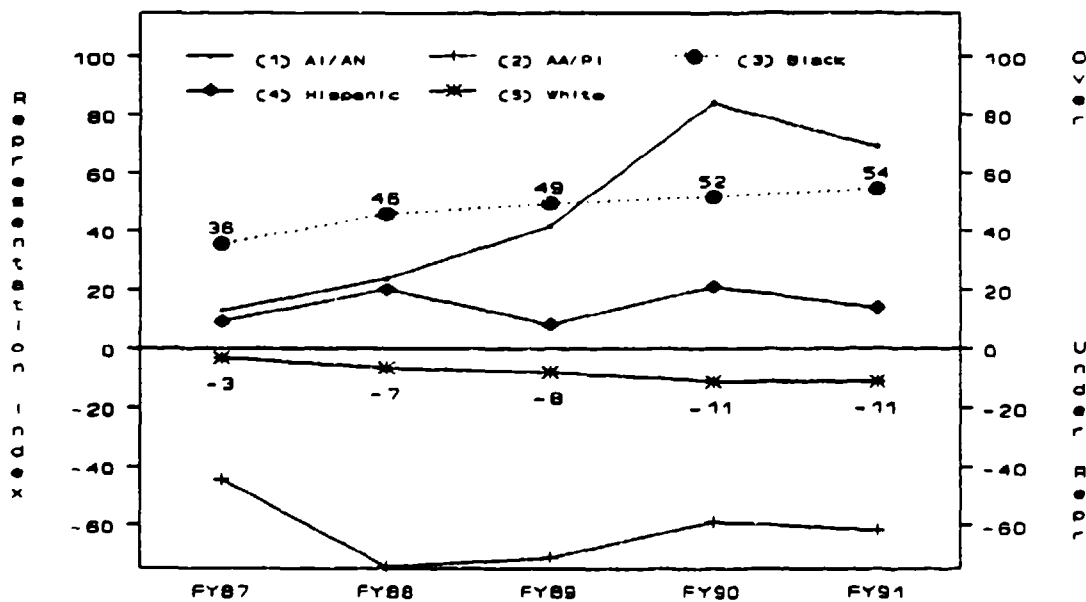


Figure A-16. Representation of Racial/Ethnic Groups in Non-Judicial Punishments - Navy (FY87-FY91)



## **APPENDIX C - REFERENCES**

## REFERENCES

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